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ABSTRACT

This guide describes successful linkage activities and programs and discusses ways in which vocational educators and administrators can develop more effective linkages with labor unions. The first two chapters outline the purpose and procedures of the feasibility study on which the guide is based. Provided next are descriptions of 24 linkage activities. Each of these descriptions includes a summary of the activity and selected examples of successful implementations of the activity in one or more States. Described next are 21 exemplary and innovative linkage programs. Each of these program descriptions includes some or all of the following: a project title, a list of project description, a project abstract, a discussion of the contributions of organized labor and vocational education to the project, a statement of the benefits of the project to both parties, and a description of critical elements. The final two chapters deal with barriers and facilitators to linkage and guidelines for developing more effective linkages between organized labor and vocational education. Appendixes to the guide include a project profile and a list of persons who responded to requests for input about linkage for this report, grouped by category, and giving name, position, and agency. A list of selected resources concludes the handbook. (MN)

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**A GUIDE TO LINKAGES BETWEEN
VOCATIONAL EDUCATION AND ORGANIZED
LABOR IN THE UNITED STATES**

Robert E. Norton
James O. Belcher

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FOREWORD

The improvement and expansion of high-quality vocational education and training programs for our youth and adults deserves the support of all Americans. With the constant decrease in the number of unskilled jobs available, the rapid technological changes occurring in some occupations, and the increasing numbers of displaced workers, the need to mobilize all available resources to provide for effective training, retraining, and upgrading programs is more acute than ever before.

Two major groups in our society, the vocational education community and the organized labor community, can and do play significant roles in the overall education and training effort. This feasibility study is based largely on the premise that vocational education programs in many states and communities could be greatly improved through strengthened linkages with organized labor. It is well known that the extent of cooperation between organized labor and vocational education varies immensely from state to state across the United States. One can easily surmise that there must be some reason for this wide variance in the amount of cooperation provided.

This segment of the feasibility study is designed to give the reader a description of the many types of successful linkages between vocational education and organized labor. Some of them are exemplary and innovative in nature, whereas others are of a more routine and expected nature. The report also looks at the barriers and facilitators to linkage identified by the respondents and provides some guidelines for improving and expanding those linkages.

Appreciation is extended to Robert E. Norton, Senior Research and Development Specialist of the National Center, who served as Project Director, and to James O. Belcher, who served as Program Assistant, for their work in conducting the project and writing this guide. Special appreciation is also extended to Roy L. Butler, Senior Research Specialist, who provided valuable advice and assistance on several aspects of the project.

Recognition is also extended to Mike Boggs, Project Director of the AFL-CIO Free Trade Union Institute's subcontract, and Dorothy Shields, Director of Education for the AFL-CIO, Washington, D.C., who cooperated by providing the project staff with the names and addresses of over 230 union leaders and by sending an introductory letter that explained the project to the same personnel.

Thanks are also due to Steve Gyuro, Harry Drier, Roy L. Butler, and Robert Bhaerman of the National Center who served as internal reviewers of this document; and to Dorothy Shields, Director of Education, AFL/CIO, and Robert W. Glover, Director, Center for Study of Human Resources, Austin, Texas, for their reviews. Last, but certainly not least, credit goes to

Shellie Schreck, project typist, for the processing and formatting of the many words making up this report, and to Judy A. Balogh for providing final editorial review of the publication.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

Talented workers are critically needed to support economic growth in the United States and in most foreign countries. The rapidly developing interdependencies among nations underscore the need to find ways to develop more effective cooperative linkages between vocational education and organized labor in the United States and throughout the world. A simultaneous need exists to minimize the problems and barriers that may erode the cooperation and exchange of research, development, and training results among nations. Innovative and alternative approaches need to be identified and investigated.

The purpose of this feasibility study was to design a multiyear plan for improving vocational education through strengthened linkages with organized labor. Specific objectives of the study included the following:

- Identify and describe present linkages between domestic vocational education and organized labor programs that indicate relative strengths and deficiencies of, and barriers to existing relationships
- Identify and describe present linkages between international vocational education and organized labor programs that indicate strengths and deficiencies of, and barriers to existing relationships in selected countries
- Develop the parameters of a multiyear program that will contribute to the improvement of vocational education by strengthening linkages with organized labor

This publication summarizes the information available on linkages between organized labor and vocational education in the United States. It describes those linkages under the following 24 category headings: (1) administrator training; (2) instructor training; (3) apprenticeship training; (4) preapprenticeship training; (5) journeyman training; (6) disadvantaged youth programs; (7) retraining the unemployed/displaced worker; (8) upgrading training; (9) vocational education/training; (10) workshops/conferences; (11) training needs assessment; (12) course/program evaluation; (13) career guidance/counseling; (14) scholarships, financial aid, awards, tuition assistance; (15) student vocational organizations; (16) teaching/resource persons; (17) curriculum development; (18) research studies; (19) information services; (20) advisory councils/committees; (21) state boards; (22) college credit/degree programs; (23) legislation development; and (24) multiple linkage activities.

The publication also identifies and describes 21 exemplary and innovative programs already in full operation in a wide ranging number of linkage areas in many states and communities. The publication concludes with a description of 23 barriers and 18 facilitators and the presentation of 13 guidelines for developing more effective linkages between organized labor and vocational education.

In a companion linkage publication, the Free Trade Union Institute of the AFL-CIO has described the linkages occurring between organized labor and vocational education on an international level.

The third and final report of this feasibility study was a collaborative effort of the National Center and the Free Trade Union Institute to produce a plan for a multiyear program of activities that can, if implemented, serve to improve vocational education nationally and internationally, by strengthening its linkages with organized labor.

There is much to be gained and little, if anything, to be lost through increased collaboration by vocational education and organized labor personnel at all levels, as both strive toward the mutually agreed upon goal of more effectively preparing America's work force for tomorrow's jobs. The information presented in this report about the 23 different types of linkage occurring and the many citations of innovative and exemplary efforts provides a basis for constructive action for anyone wanting to develop new linkages or expand current efforts within their state or community.

CHAPTER I

INTRODUCTION

While there are some obvious differences in the goals of vocational educators and organized labor leaders, they also share a number of common goals. It seems very important, therefore, that we take a look at some of those common goals as a starting point in a feasibility study designed to ascertain what can be done to improve vocational education through strengthened linkages with organized labor.

Perhaps foremost among the common goals shared is the mutual concern for the preparation of America's youth and adults for the world of work. Both vocational education and organized labor are especially concerned with the approximately 80 percent of the population who will enter the work force as semiskilled, skilled, and technical workers. Both groups want today's and tomorrow's workers to be productively employed in real jobs of their own choosing.

A second shared goal is the strong desire for vocational education and training programs that are relevant, effective, and efficient. Both labor and education want programs that are up-to-date technologically and that seek to maximize benefits for the youth and adults involved, whether they are undergoing training, retraining, or upgrading. Both seek to maximize the impact of the always limited financial resources available for vocational education and training.

A third common goal recognized by many is the realization that both organized labor and vocational education can accomplish more by working together than by working alone, or worse, at odds with one another. Organized labor possesses a wealth of technical knowledge about the workplace, whereas vocational educators possess a wealth of instructional expertise. Organized labor can provide on-the-job instruction to trainees through apprenticeship and cooperative education programs, whereas vocational education is well equipped to provide the necessary related instruction in their classrooms and laboratories.

Purpose of the Study

Although it is widely acknowledged by many that vocational educators and organized labor leaders should be working together harmoniously for the reasons cited, the fact is that the degree of cooperation ranges from little to none in many states and communities to extensive collaboration in some states and localities. It was felt that one way to improve vocational education programs by strengthening linkages with organized labor groups would be to conduct a feasibility study with the following major objectives:

- Identify and describe the linkages that currently exist between domestic vocational education and organized labor programs

- Identify and describe the linkages that currently exist between international vocational education and organized labor programs
- Develop a multiyear program with specific recommendations and activities that could be implemented to improve vocational education by strengthening its linkages with organized labor

Each of these major objectives is being dealt with in separate reports. This publication, which focuses on the domestic linkages that presently exist, was developed by the National Center for Research in Vocational Education with the assistance of the National Office of the AFL-CIO.

The publication on international linkages was the responsibility of the AFL-CIO's Free Trade Union Institute under a subcontract arrangement with the National Center.

The third publication on a multiyear plan for improving relationships was developed jointly by the National Center and the Free Trade Union Institute.

Organization of This Report

The second chapter of this publication describes the procedures used to collect and classify the information assembled in regard to linkages.

The third chapter contains a general description of each of the 23 specific, different types of linkage activities found to exist. The activities described are organized into the following categories:

- Administrator training
- Instructor training
- Apprenticeship training
- Preapprenticeship training
- Journeyman training
- Disadvantaged youth programs
- Retraining the unemployed/displaced worker
- Upgrading training
- Vocational education/training
- Workshops/conferences
- Training needs assessment
- Course/program evaluation
- Career guidance/counseling
- Scholarships, financial aid, awards, tuition assistance
- Student vocational organizations

- Teaching/resource persons
- Curriculum development
- Research studies
- Information services
- Advisory councils/committees
- State boards
- College credit/degree programs
- Legislation development

Within each category, citations and brief descriptions of the linkage activities that are occurring are presented alphabetically by state. When multiple linkage activities were described by a single state department, labor union, vocational school or college, or other agency, the full citation and description are presented under a 24th category, multiple linkage activities, and specific cross-references are made under each relevant activity heading. The exception to the rule is when specific or multiple linkage activity descriptions were considered to be of an exemplary or innovative nature. In such cases, the description is presented in chapter four.

Chapter four contains descriptions of the linkage programs and activities that are considered to be innovative or exemplary in nature. These descriptions are more comprehensive and include information about the purpose(s) of the linkage activity, who is linking with whom, the contributions of both organized labor and vocational education to the activity, the benefits to both vocational education and organized labor, and where identified, elements considered critical to the success of the linkage activity. Again, programs are presented by linkage category, and within each category, alphabetically by state. In both chapters three and four, source information is provided for the reader who wishes to obtain more information about a specific linkage activity or program.

Chapter five summarizes the various deficiencies and barriers found to be inhibiting more effective linkages between organized labor and vocational education. It also presents descriptions of the various strengths and facilitators that are reported by respondents to contribute to more effective collaborative relationships.

Finally, chapter six presents some guidelines for both organized labor and vocational education personnel in regard to how they might promote more effective linkages and cooperative relationships with each other.

CHAPTER II

PROCEDURES

A major effort was made to assemble and review all possible data concerning linkages within the parameters of the contracted efforts.

Literature Search

A computerized search was made of several databases: ERIC (1966 to present), NTIS (1964 to present), Management (1974 to present), and ABI/INFORM (1971 to present), but very little was found that focused specifically on the topic of linkages between organized labor and vocational education. A manual search of the Research Library at the National Center was also made, but few relevant documents were discovered in the formal information system.

It quickly became clear that information about past and current domestic linkage efforts would have to be obtained directly from a number of vocational education, organized labor, governmental, and professional association sources. The practitioners and various labor, education, and governmental personnel needed to be identified and contacted by letter and/or telephone in order to obtain relevant information.

Data Collection

Based on the objectives of the study, it was decided to contact four major categories of personnel: (1) general and vocational educators, (2) organized labor representatives, (3) governmental personnel, and (4) professional association members. The following educators were contacted by letter:

- State directors of vocational education (56 persons)
- State directors of postsecondary education (56 persons)
- Vocational education department apprenticeship liaisons (56 persons)
- Large city directors of vocational education (48 persons)
- Members of the National Postsecondary Alliance (38 persons)

With the assistance of Michael Boggs, project director of the AFL/CIO Free Trade Union Institute, and Dorothy Shields, director of education for the AFL/CIO, the following 238 labor leaders were identified and contacted by letter: (1) AFL/CIO state federation presidents (50 persons), (2) education directors of international unions (131 persons), (3) directors of university and college labor education studies centers (33 persons), and (4) members of the Joint Apprenticeship Committee of the AFL/CIO Metal Trades Department and Building and Construction Trades Department (23 persons).

Dorothy Shields also greatly assisted the project staff's data collection efforts by sending a letter of introduction to all the presidents of the AFL-CIO state central bodies and to the education directors of all national and international union affiliates. Her letter explained the purpose of the feasibility study and urged their cooperation in supplying relevant information.

The governmental personnel who were contacted consisted of the 10 regional Bureau of Apprenticeship and Training (BAT) directors, and 50 state BAT directors.

The professional association personnel contacted included the following:

- National Association of State and Territorial Apprenticeship Directors (NASTAD), (33 persons)
- National Association of Government Labor Officials (NAGLO), (64 persons)

Each person identified was sent a personal letter asking for assistance in identifying linkage activities in their state, union, or other jurisdiction. The letter also (1) requested help in identifying innovative or exemplary practices, and linkage barriers and facilitators, and (2) solicited suggestions for activities that might be carried out to strengthen further relationships between organized labor and vocational education. A project profile was prepared and sent along with the letters to provide information about the feasibility study. A copy of the basic letter and the project profile are presented in appendix A and B, respectively.

The National Center's computer-based message switching terminal was also used to send the following electronic message to 40 state research coordinating units and/or state liaison representatives and to the 6 national vocational education curriculum coordination centers.

Urgent need to identify present linkage activities between vocational education and organized labor groups in the United States. Particularly interested in identifying innovative and exemplary practices, strengths and weaknesses (barriers) of existing relationships, and ideas on how vocational education could be improved through more cooperative linkages with organized labor groups. Please send descriptive materials regarding linkage activities and/or suggestions for the strengthening of linkages as soon as possible to: Robert E. Norton, National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, OH 43210, or phone 800-848-4815 or 614-486-3655.

In addition to the contacts made by letter and electronic message, phone calls were also made by project staff to request initial information or to seek additional or clarifying information after responses were received. A total of over 90 calls were made by project staff.

Definitions

For the purposes of this study, linkage was defined as any activity either completed or ongoing in which representatives of both organized labor and vocational education cooperate to provide vocational education, training, or related services to youth and/or adults. Excluded were programs and activities operated by either group on their own, programs that involve labor cooperation with nonvocational education agencies, and programs that do not contribute directly or indirectly to improved vocational-technical education or training programs. The definition of vocational training was interpreted broadly to include programs funded by the Department of Labor such as Job Corps, CETA, and Job Training and Partnership Act (JTPA) programs.

Two other definitions were developed for use by project staff in selecting innovative and exemplary programs and practices for inclusion in chapter four. A program innovation was defined as a program that is successful and that represents a new or unique approach to linkage. An exemplary program was defined as a program that is outstanding in some way (e.g., a sustained effort, an effort of large magnitude, or a multifaceted effort), an example of the best, most effective type of linkages occurring.

Program Descriptions

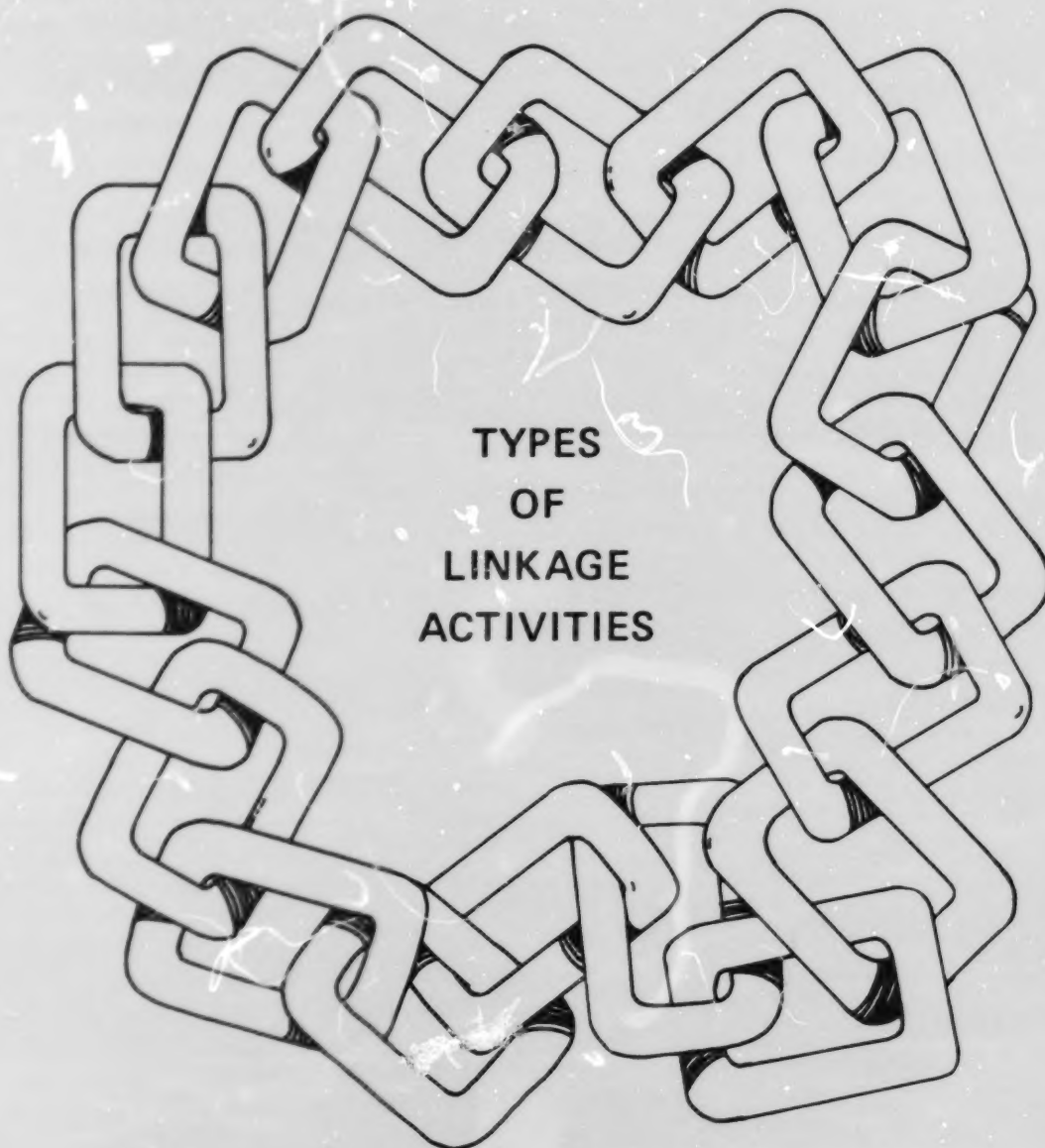
Using the information gathered through the literature search, letters and related materials received, and telephone calls, project staff wrote descriptive summaries and made judgments about program classifications. Selections were also made of programs that were considered to be innovative or exemplary, and various barriers and facilitators to cooperative working relationships between organized labor and vocational education were identified. In all, a total of 137 citations have been made under the 23 specific areas of cooperation identified, including the specification of 21 programs as innovative or exemplary. Many persons responded very thoroughly to our request for assistance; hence, a large variety of cooperative linkages are described.

In our efforts to be comprehensive, however, project staff was largely dependent upon the information supplied by the persons contacted. Project funding, timelines, and data collection constraints precluded the verification of programs, the face-to-face interviewing of organized labor or vocational education leaders, and a more comprehensive data collection effort.

CHAPTER III

DESCRIPTION OF LINKAGE ACTIVITIES

This chapter contains a description of each of the linkage activities included in the feasibility study. The various linkage activities have been broken down into 23 different categories, plus a 24th category for programs with multiple linkages underway. The entries are listed alphabetically by state within each category.



ADMINISTRATOR TRAINING

Administrator training involves the preparation of various leadership personnel in the supervisory and administrative competencies required to effectively manage vocational and technical education programs, apprenticeship, and other skill training programs. This instruction is commonly provided through programs supported by joint labor-management training funds and vocational and technical education departments in higher education institutions.

SELECTED EXAMPLES

State	Description
OHIO	NATIONAL TRAINING FUND UNIVERSITY CENTER (NTF/UC). For a complete description of this program, which includes workshops for joint apprenticeship and training administrators, see chapter four on exemplary programs, Multiple Linkages, Ohio.

INSTRUCTOR TRAINING

Instructor or teacher training involves the preparation of persons who instruct youth and adults in vocational and technical education and apprenticeship training programs. It includes the preparation of instructors in the acquisition of effective teaching or pedagogical skills, a function often performed by various public vocational education institutions and agencies. It also includes the technological updating of instructors and teachers from secondary and postsecondary vocational and technical education institutions, apprenticeship, and other skill training programs, a function usually accomplished with the assistance and cooperation of union, business, and/or industrial leaders.

SELECTED EXAMPLES

State	Description
COLORADO	EMILY GRIFFITH OPPORTUNITY SCHOOL. The more than 700 part-time instructors involved with the school are trained in lesson planning and teaching techniques. A large number of these instructors come from organized labor. For a complete description of this program, see chapter four on exemplary programs, Multiple Linkages, Colorado.
DISTRICT OF COLUMBIA	EDUCATIONAL TRAINING AND RETRAINING PROGRAM. The Graphic Communications International Union, which initiated and directs this program, also assumes responsibility for training its instructors in effective teaching methods. For a complete description, see Multiple Linkage Activities, District of Columbia, in this chapter.
INDIANA	UNITED ASSOCIATION INSTRUCTORS TRAINING PROGRAM. Perhaps the oldest--and certainly one of the most successful--of such programs in the country, this union-educator linkage has been invaluable in upgrading the skills of the United Association's instructors. For a complete description, see chapter four on exemplary programs, Multiple Linkages, Indiana.
MARYLAND	GENERAL MOTORS TRAINING MATERIALS PROJECT. This project was set up to meet the local General Motors plant's needs for instructors to teach workers to use a new system of robotics, and to inform workers of the

SELECTED EXAMPLES

State	Description
	components of a new benefits package. For a complete description, see chapter four on exemplary programs, Multiple Linkages, Maryland.
OHIO	PAINTING, DECORATING, AND DRYWALL APPRENTICESHIP TRAINING INSTRUCTORS SEMINARS. The National Center for Research in Vocational Education has conducted this series of seminars on an as needed basis since 1976. The goal is to improve the teaching methods of the painting, decorating, and drywall apprentice instructors and to upgrade their teaching materials. For a complete description, see Multiple Linkage Activities, Ohio, in this chapter.
OHIO	INSULATION INDUSTRY'S NATIONAL APPRENTICE AND TRAINING FUND (IINATF). Since 1971 when IINATF was established, the fund has served to formulate national policies on apprentice training in the industry and has issued basic standards to be used by affiliated training organizations. As a result of a contract with the National Center for Research in Vocational Education, IINATF has been able to provide its apprentice instructors with a nationally integrated package of materials and skills. Both basic and advanced apprentice instructor workshops have been conducted by the National Center. For a complete description, see chapter four on exemplary programs, Multiple Linkages, Ohio.
OHIO	NATIONAL TRAINING FUND UNIVERSITY CENTER (NTF/UC). For a complete description of this program, which includes a multilevel instructor training program, see chapter four on exemplary programs, Multiple Linkages, Ohio.
OHIO	NATIONAL GLAZIERS AND GLASSWORKERS INDUSTRY APPRENTICESHIP TRAINING AND JOURNEYMEN EDUCATION WORKSHOP. Conducted in Columbus, Ohio, in 1981, the workshop provided training services for approximately 50 union instructors of related apprentice training. The objectives included the following: • Acquaint instructors with the philosophy of

SELECTED EXAMPLES

State	Description
	trade instruction, especially as applied to their trade • Provide them with a working knowledge of teaching methods that would be appropriate to the fund's apprentice curriculum materials • Familiarize them with the fund's newly developed apprentice curriculum materials and helping instructors use these materials • Introduce instructors to various audiovisual media and providing assistance in adapting the media for presentations of the fund's apprentice curriculum These objectives were attained through four mini-courses: psychology of adult learning, instructional methodology and lesson planning, managing the learning process through the use of audiovisual media, and evaluating the learner. An important aspect of the instructor training sessions was course evaluation that measured the program participants' assessment of the instruction provided during each minicourse. The results helped determine the value of the training sessions and provided information for the Fund and the National Center to use in making necessary alterations to improve the effectiveness of future training programs. <u>Participants:</u> The National Center for Research in Vocational Education and National Glaziers and Glassworkers Industry Apprenticeship Training and Journeymen Education Fund. <u>Source:</u> Lucille Campbell-Thrane, Associate Director; The National Center for Research in Vocational Education; The Ohio State University; 1960 Kenny Road; Columbus, OH 43210.

APPRENTICESHIP TRAINING

An apprenticeship training program involves an unskilled worker who is learning a skilled craft or trade (e.g., electrician, carpenter, plumber, printer, machinist) under the direction of a skilled worker (journeyman). Apprenticeship programs are typically 2 to 4 years in length, depending upon the knowledge and skill requirements of the trade. Apprenticeship training consists of two major components: (1) related classroom instruction (minimum of 144 hours per year) and (2) on-the-job training. Programs are typically operated by either an employer, a group of employers, or a joint apprenticeship committee (JAC) representing both the employer and the union. A representative of the educational community may also be included on the JAC. More and more JACs are engaging in cooperative ventures with postsecondary institutions for the provision of the related instruction aspect of apprenticeship training. Over 730 occupations have been recognized as apprenticeable trades by the U.S. Department of Labor's Bureau of Apprenticeship and Training.

SELECTED EXAMPLES

State	Description
COLORADO	EMILY GRIFFITH OPPORTUNITY SCHOOL. One of the primary missions of the school is to provide related instruction for registered apprenticeship programs. For a complete description of this school, see chapter four on exemplary programs, Multiple Linkages, Colorado.
DISTRICT OF COLUMBIA	EDUCATIONAL TRAINING AND RETRAINING PROGRAM. A feature of this program, which is operated by the Graphic Communications International Union, is that apprentices are required to attend the locally conducted programs (journeymen attend voluntarily) and comprise about one third of the enrolled students. For a complete description, see Multiple Linkage Activities, District of Columbia, in this chapter.
DISTRICT OF COLUMBIA	THE WASHINGTON, D.C. SCHOOL OF APPRENTICESHIP. This school, which is a component of the District of Columbia public school system, provides the related instruction for apprentices in a number of craft areas. For a complete description of this school, see chapter four on exemplary programs, Apprenticeship Training, District of Columbia.

SELECTED EXAMPLES

State	Description
HAWAII	HOSPITALITY EDUCATION INTERNSHIP. This program is intended to help students make practical application of their classroom education through on-site work station assignments, improve their job skills and work attitudes, and obtain work-related experiences in fulfillment of graduation requirements. Local hotels provide on-the-job experiences through a rotation of assignments in the guest-contact, housekeeping, and food-beverage areas. The college provides an evaluation instrument for each student and coordinates the evaluation among hotel, college, and student. Students are required to maintain a log of their internship experiences and to prepare reports as necessary. The Hospitality Internship Advisory Committee includes five representatives from Kapiolani Community College, one from the AFL-CIO, Local 5, and nine representatives from hotels, travel agencies, and an airline. Participants: Kapiolani Community College and AFL-CIO, Local 5. Source: Leon Richards, Dean of Instruction; Kapiolani Community College; 620 Pensacola Street; Honolulu, HI 96814.
KENTUCKY	GREAT ONYX JOB CORPS CENTER APPRENTICESHIP TRAINING FOR DISADVANTAGED YOUTH. This highly successful Job Corps program is unusual in that the participants receive their apprenticeship training on a campus located in a somewhat isolated national park. For a complete description, see Multiple Linkage Activities, Kentucky, in this chapter.
IDAHO	RELATED INSTRUCTION. Linkages between the School of Vocational-Technical Education and organized labor began, typically, with the school providing related instruction for registered apprenticeship programs. For more information, see Multiple Linkage Activities, Idaho, in this chapter.
ILLINOIS	NIGHT SCHOOL APPRENTICESHIPS. From the late 1960s to the middle 1970s, the Alton night school program trained 2,600 persons in apprenticeable trades. A program would be set up with input from craft and trade union representatives who recommended instructors and assisted in curriculum development. Classes

SELECTED EXAMPLES

State	Description
	were conducted in a high school. This highly successful effort ended as all adult training functions were assumed by the community college. <u>Participants:</u> Alton Community Unit School District No. 11 and various local unions. <u>Source:</u> Dean Browning, Administrative Assistant for Vocational Education; Alton Community Unit School District No. 11; Alton, IL 62002.
ILLINOIS	KELLY-SPRINGFIELD COMPETENCY-BASED APPRENTICESHIP TRAINING. This innovative program utilized competency-based apprenticeship training as a part of its efforts to meet specific local employment needs. For a complete description, see chapter four on exemplary programs, Apprenticeship Training, Illinois.
LOUISIANA	RELATED INSTRUCTION. The Louisiana State Department of Education reported that linkage activity was limited primarily to the state's postsecondary vocational-technical schools delivering the 144 hours of the related instruction required for approved apprenticeship programs. <u>Participants:</u> Louisiana State Department of Education and various labor unions. <u>Source:</u> N. J. Stafford, Jr., Assistant Superintendent; Division of Vocational Education; State Department of Education; P.O. Box 44064; Baton Rouge, LA 70804.
MINNESOTA	INNOVATIVE COOPERATION. The Suburban Hennepin Area Vocational-Technical Institute, in cooperation with several unions, offers major innovative apprentice programs. Trainees build a full-scale house and then sell it on bids. For more information, see chapter four on exemplary programs, Multiple Linkages, Minnesota. <u>Participants:</u> Suburban Hennepin Area Vocational-Technical Institute, sheet metal workers, painters and decorators, carpenters, and cabinetmakers.

SELECTED EXAMPLES

State	Description
MISSISSIPPI	Source: William Mamel, Director; Suburban Hennepin Area Vocational-Technical Institute; 1820 North Xenium Lane; Minneapolis, MN 55441. SUPPORT SERVICES. At the local level in Mississippi, most linkages between labor and vocational education occur in the area of providing support services for the related instruction phase of registered apprenticeship programs. For a complete description, see Multiple Linkage Activities, Mississippi, in this chapter.
NEW YORK	NEW YORK STATE ASSOCIATE IN APPLIED SCIENCE PROGRAM. Recognizing the fact that workers, who have acquired their skills through nonacademic training programs such as apprenticeship, have found themselves at a disadvantage because they lacked an academic educational background, the New York State Industrial Commissioner convened representatives of labor, management, government, education, and the state apprenticeship training council (in Albany on March 21, 1972) to explore the possibilities of establishing an associate degree programs for apprentices. The program provides an opportunity for apprentices to complete the requirements for a 2-year college degree at the same time they are completing their apprenticeship training. A number of these program have been organized since 1972, including sheet metal technology, construction technology, general apprentice, operating engineer, electrical technology, and automotive technology. The programs maintain high academic standards and the same curriculum requirements as other programs approved for the colleges. The apprentices receive a specific number of credit hours for the training they receive on the job; the balance of their credit requirements are offered through a community college. The program has been received with enthusiasm by the unions, management, and apprentices. Even many journeymen with years of trade experience have enrolled. The new program was not intended to replace the existing apprenticeship training system but rather to complement it. Previously, apprentices received their skills training through on-the-job work experience and by noncredit college courses. Now the apprentice receives credit toward an associate degree. It was

SELECTED EXAMPLES

State	Description
NEW YORK	expected that about 2,000 apprentices would be working for associate degrees when this program reached full maturity. <u>Participants:</u> New York state community colleges and various labor unions. <u>Source:</u> Donald J. Grabowski, Director of Employability Development; State Department of Labor; Job Service Division; State Office Building; Albany, NY 12240. LEA, BOCES. Local education agencies (LEAs) and boards of cooperative educational services (BOCES), in cooperation with local labor councils throughout the state, provide a variety of apprenticeship training programs for union members. BOCES operate such programs in several locations, including Oswego, Onondaga, Cayuga, Cortland, St. Lawrence, and Wayne-Finger Lakes. Two examples of LEA apprenticeship training programs include the one at Kingston for electricians and New York City's variety of training programs that are funded with the Vocational Education Act monies. For more information, see chapter four on exemplary programs, Multiple Linkages, New York.
NORTH CAROLINA	STATE COMMUNITY COLLEGES. The primary mission of the community college system is to train the citizens of the state for jobs that are available or will become available. There are 227 occupational curricula offered. Some of the graduates of these programs are granted advanced placement in apprenticeship programs; others are hired in entry-level jobs. Hundreds of adult occupational extension classes are offered for upgrading training or for developing preemployment skills. The Industry Services Division is involved in establishing training for employees of new and expanding industry. The community colleges provided related instruction for approximately 85 percent of all registered apprentices during 1983. <u>Participants:</u> North Carolina State Board of Community Colleges and various labor unions. <u>Source:</u> Robert W. Scott, State President; State Board of Community Colleges; Department of Community Colleges; Raleigh, NC 27611.

SELECTED EXAMPLES

State	Description
TEXAS	ASSOCIATE IN APPLIED ARTS AND SCIENCE DEGREE: ELECTRICAL CONSTRUCTION TECHNOLOGY. This apprenticeship training program features an associate degree from the college as part of the requirements for certification. For a complete description, see chapter four on exemplary programs, Apprenticeship Training, Texas.
UTAH	RELATED EDUCATION. The related education component of most apprenticeship programs in the state is offered in a postsecondary institution. The area vocational centers and the colleges work with labor to provide physical facilities in which to offer the related education. The state covers part of the cost for apprenticeship programs at the area vocational centers and in one or two of the community colleges. <u>Participants:</u> State postsecondary and vocational education institutions of Utah and various labor unions. <u>Source:</u> David R. Terry, Assistant Commissioner for Attified Health and Vocational Programs; State Board of Regents; 807 East South Temple, Suite 204; Salt Lake City, Utah 84012.
WYOMING	APPRENTICESHIP PLANT MAINTENANCE MECHANICS PROGRAM. This program, described as unique in 1974, was the result of close cooperation between Casper College, Pacific Power and Light, and Local 127 of the Utility Workers of America. Of the 20 enrolled students, 19 had a college background and 1 had a degree in business administration. The demanding 3-year course provided 6,000 hours of instruction before the students were certified as journeyman mechanics. Students alternated between classrooms at the plant and the plant maintenance shop. Each student worked regularly with a journeyman employee of the company. The syllabus included drafting, welding, machine shop, bench work, applied mathematics, measurements, and many other courses. When they completed the program, the new journeymen were expected to be employed by the Pacific Power and Light Company at either the Glenrock plant or at the new high-steam generation plant at Rock Springs.

SELECTED EXAMPLES

State	Description
	<u>Participants:</u> Casper College and Utility Workers of America, Local 127. <u>Source:</u> Richard C. Reitz, Director of Public Information; Casper College; Casper, WY 82601.

PREAPPRENTICESHIP TRAINING

These training programs are designed to provide career guidance and to increase the student's potential of entering an apprenticeship program. The students involved in preapprenticeship training are mostly high school juniors and seniors. The programs are designed to be exploratory in nature and typically to acquaint students with the terminology of the trade, hands-on experience with the basic tools of the trade, an orientation to safety equipment and procedures, and an introduction to the basic work processes that comprise the trade. In most cases where programs have been reviewed and approved, the graduating student receives both a high school diploma and some credit toward apprenticeship program completion.

SELECTED EXAMPLES

State	Description
IOWA	SCHOOL/WORK LINKAGE PROJECT. This project was developed by and served a single local school system. It was designed to develop apprenticeship opportunities for high school seniors (while in school) on a part-time basis. The goal is to provide full-time employment upon graduation. The student receives academic and apprenticeship credit while in the program. <u>Participants:</u> Des Moines School District, the Machinists' Union, and various other labor unions. <u>Source:</u> David L. Billings, Director; Des Moines Independent Community School District; 1800 Grand Avenue; Des Moines, IA 50307.
MINNESOTA	TRAINING SUPPORT. A unique aspect of the St. Paul Technical Vocational Institute (TVI) preapprenticeship program is that office space at the TVI is provided for the training coordinators, who are union members involved in related instruction. The unions donate equipment and supplies for programs, and salaries of the union training coordinators are subsidized by TVI. For a complete description, see chapter four on exemplary programs, Multiple Linkages, Minnesota. <u>Participants:</u> St. Paul Technical Vocational Institute, sheet metal workers, plumbing pipe fitters, and iron workers.

SELECTED EXAMPLES

State	Description
MINNESOTA	<u>Source:</u> Leon Linden, Director; St. Paul Technical Vocational Institute; 235 Marshall Avenue; St. Paul, MN 55102. NONTRADITIONAL INSTRUCTION. The Dakota County Area Vocational-Technical Institute has offered preapprenticeship blueprint reading instruction for female apprentices, in addition to other exemplary programs. For a complete description, see chapter four on exemplary programs, Multiple Linkages, Minnesota. <u>Participants:</u> Dakota County Area Vocational-Technical Institute, International Brotherhood of Electrical Workers (IBEW), and Retail Clerks Union. <u>Source:</u> David Schroeder, Director; Dakota County Area Vocational-Technical Institute; 1300 East 145th Street; Rosemount, MN 55068.
NEW YORK	THE COOPERATIVE APPRENTICESHIP PROGRAM. Cooperative Apprenticeship Program (CAP) participants are students who are currently, or have previously been, enrolled in an occupational education program and are completing their regular academic requirements for high school graduation. Qualified cooperative work experience coordinators identify students who are already working part-time in apprenticeable occupations. The occupations selected are reviewed and approved by the New York State Department of Labor or the Federal Bureau of Apprenticeship and Training. The cooperative coordinator meets periodically with the employer to determine the progress of the CAP apprentice, and meets regularly with the student for related instruction. A semiannual report of the student's progress is made to the apprentice training representative. After graduation from high school, the CAP student is transferred by the participating school to full apprenticeship. Students receive credit for their apprenticeship on-the-job training requirement on an hourly basis and based on that credit. <u>Participants:</u> The University of the State of New York and various labor unions.

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State	Description
OHIO	Source: Lee A. Traver, Chief; Bureau of Technology, Trade, and Agriculture Programs; University of the State of New York; State Education Department; 99 Washington Avenue; Albany, NY 12234. SCHOOL-TO-APPRENTICESHIP PROGRAM. This program utilizes the existing vocational systems to assist senior high school students in making the transition from school to apprenticeship as smooth as possible. For a complete description, see chapter four on exemplary programs, Preapprenticeship Training, Ohio.

JOURNEYMAN TRAINING

This type of training provides journeymen with the opportunity to improve their technical knowledge and work skills. These training programs focus on new technological changes affecting the trade and on advanced skills needed by expert tradespersons. This type of training is frequently provided by community colleges and institutions of higher education through summer workshops, courses, and seminars, and by trade specific JACs in their own facilities. Participation in most journeyman continuing education programs is voluntary.

SELECTED EXAMPLES

State	Description
DISTRICT OF COLUMBIA	EDUCATIONAL TRAINING AND RETRAINING PROGRAM. About two-thirds of the trainees in this program are certified journeymen. For a complete description, see Multiple Linkage Activities, District of Columbia, in this chapter.
INDIANA	UNITED ASSOCIATION INSTRUCTOR TRAINING PROGRAM. For a complete description, see chapter four on exemplary programs, Multiple Linkages, Indiana.
MISSOURI	ASSOCIATE IN APPLIED SCIENCE, INDUSTRIAL ELECTRONICS TECHNOLOGY. The Industrial Electronics Technology program represents a cooperative associate degree arranged with the International Brotherhood of Electrical Workers, Local 1, and the National Electrical Contractors' Association, St. Louis Chapter. The program is open to journeyman electricians and to apprentices who have completed the required five semesters of classroom instruction. Coursework and on-the-job training earn 29 credit hours toward the 66-hour program that prepares students for positions in drafting, technical writing, manufacturing, testing, installation, and maintenance in electrical and electronic occupations. <u>Participants:</u> St. Louis Community College and International Brotherhood of Electrical Workers, Local 1. <u>Source:</u> Bob Metzger; St. Louis Community College at Forest Park; 5600 Oakland Avenue; St. Louis, MO 63110.

DISADVANTAGED YOUTH PROGRAMS

This involves training programs for youth who are disadvantaged in one or more ways. This type of training usually involves the development of basic skills as well as technical and vocational skills. The Department of Labor through its Job Corps program sponsors many disadvantaged youth programs in cooperation with various organized labor groups. These are both residential and nonresidential in nature. Most vocational education institutions at the secondary and postsecondary level also offer mainstreaming and/or special education programs for disadvantaged youth.

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State	Description
KENTUCKY	GREAT ONYX JOB CORPS CENTER APPRENTICESHIP TRAINING FOR DISADVANTAGED YOUTH. This highly successful Job Corps program is unusual in that disadvantaged urban youth are trained on a campus in a mountainous and somewhat isolated national park. For a complete description, see Multiple Linkage Activities, Kentucky, in this chapter.
MARYLAND	THE BRAC TRAINING PROGRAM. Managed by the Brotherhood of Railway Clerks, this program provides valuable vocational instruction for Job Corps trainees. For a complete description, see Multiple Linkage Activities, Maryland, in this chapter.
MICHIGAN	THE DETROIT PRE-EMPLOYMENT TRAINING CENTER. The center, initiated by General Motors with support from other corporations and the United Auto Workers, enrolls 140 disadvantaged youths in each cycle of its training program that simulates an industrial business environment. Most participants are juniors and seniors from 22 high schools. Of the high school dropouts who participate, most return to school after they complete the course. Local teachers and administrators report that the attitudes and behavior of center trainees improve greatly over the 4 weeks, especially in punctuality, cooperation, and self-confidence. The program stresses discipline. Participants sign contracts as if they were regular employees in a company. The contract requires school youth to exhibit exemplary behavior in school. Students are divided into "union" locals and they punch time clocks. Each local of 20 students elects a

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State	Description
MISSISSIPPI	shop steward to register grievances against unfair charges. Students learn to adapt to different supervisory styles as they communicate complaints to management through shop stewards. Class attendance ranged from 95 to 99 percent, and union chapters compete for attendance and performance awards. Placement is not guaranteed, but of the first 42 graduates, all but 2 were placed in General Motors plants. The center currently offers courses in 33 areas that range from "assembly line and small parts" to "the job search process," clerical office skills, and sales. Students also learn to complete job applications, develop resumes, and dress properly. The center provides training in adapting to work. A course on constructing brakes for a GM car, for example, emphasizes cooperation with co-workers on an assembly line; a course on negotiation teaches the role of union membership. Participants: Pre-Employment Training Center and United Auto Workers. Source: Delbert Gray, Director; Pre-Employment Training Center; 8820 Second Avenue; Detroit, MI 48202. JOB CORPS. Organized labor has often participated in Job Corps programs through direct referral to and placement of Job Corps graduates in many occupations; such programs typically deal with disadvantaged Mississippi youth aged 16 to 24. For more information, see Multiple Linkage Activities, Mississippi, in this chapter.

RETRAINING THE UNEMPLOYED/DISPLACED WORKER

This type of activity involves adults who for whatever reason that are unemployed or underemployed. The vast majority are workers who have been displaced by new technology or by foreign competition that has caused plant closures or reductions in work force. Most of these programs have been funded partially by CETA and now JTPA funds and by state or federal vocational education monies.

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State	Description
ARKANSAS	THE GOVERNOR'S DISLOCATED WORKER PROGRAM. This program brings to bear the expertise of four state organizations along with local resources to help people who have lost their jobs because of the economy. The program team is composed of coordinators from the Arkansas Employment Security Division (ESD), the Vocational-Technical Education Division (VTED), the Arkansas Industrial Development Commission (AIDC), and the state AFL-CIO. The team meets to review plant closures or mass layoffs to determine the impact on the community. If the impact is sufficient to warrant a need for the program, the team meets with local leaders and resource groups to determine needs and develop plans. The AFL-CIO brings together all local resources in a worker assistance workshop. Many of the affected employees have worked for many years, and having been independent, do not know what kinds of assistance are available. The workshop not only advises them of what is available, but representatives are at the workshop where the participants can talk to them and sign up for the services. Participants also receive a workbook with instructions on how to find, get, and keep jobs. The following is an outline of the program's operating procedure: 1. When any member of the team learns of a mass layoff or plant closure, he/she immediately contacts the ESD coordinator. 2. The ESD coordinator makes the necessary contacts to verify that there is a permanent layoff or plant closure.

SELECTED EXAMPLES

State	Description
	3. A team meeting is held to discuss the layoff or plant closure. 4. The team makes the decision whether the layoff warrants a project. 5. If the team cannot reach a consensus, the questions are elevated to the administrator's office. 6. If the team decides to attempt a project, a community meeting is scheduled. 7. The administrator is invited and asked to invite any program operators and private industry councils (PICs). Also invited are the chamber of commerce, the local ESD, local vocational-technical schools, news media representatives, the employer, union representatives, and other interested parties. 8. The ESD coordinator sends notices to all who have been invited. 9. Follow-up calls to those invited are made shortly before the date of the meeting. 10. All team members are required to attend the community meeting. 11. At the community meeting, the Governor's Dislocated Worker Program is discussed. Then discussion is held to determine what needs to be done, and agreements are made as to who is to do what. As much local involvement as possible is encouraged. 12. Agreed upon procedures are written up and all involved parties are given a copy. 13. If news media representatives are not in attendance, a news release is prepared by the ESD coordinator and approved by the agency's media section and the employer. 14. If a workshop is agreed upon, it will be set up and conducted by the AFL-CIO team member. All notices and news releases are cleared by ESD. 15. All placement and on-the-job training activities are also coordinated with the local ESD. 16. A weekly activity report is prepared for the governor's office. A copy of it is given to each team member.

SELECTED EXAMPLES

State	Description
	<u>Participants:</u> Arkansas AFL-CIO, Arkansas Employment Security Division, Vocational-Technical Education Division, and Arkansas Industrial Development Commission. <u>Source:</u> Denise Williams, AFL-CIO Coordinator; Arkansas AFL-CIO; 1115 Bishop Street; Little Rock, AR 72202.
IDAHO	PLANT CLOSURE. The boilermaker's union and the university collaborated to assist a number of union welders when a factory closed operation. For more information, see Multiple Linkage Activities, Idaho, in this chapter.
ILLINOIS	PRE-TRAINING OF UNEMPLOYED MINORITIES: WOMEN. This retraining program was set up in 1980 to train 20 women as cement mason apprentices or construction labors. For a complete description, see chapter four on exemplary programs, Retraining the Unemployed/Displaced Worker, Illinois.
MICHIGAN	FROM UNEMPLOYMENT TO EMPLOYMENT: A FULL-SERVICE INTERVENTION MODEL. This comprehensive, full-service intervention program consisting of six components was arranged for unemployed, dislocated, and underemployed workers. Guidelines emphasize the interdependence of the components. It is also stressed that while not all affected workers need every component, the components should to be operational when needed. The model should be adapted to meet the specific needs of workers at any given site. The six components are: information about available benefits and services; support services, such as United Auto Workers (UAW) Community Services; assessment of academic and vocational skills; training and education, which must be employment oriented; placement, including self-placement strategies, and outplacement, which has been effective at some UAW sites; and follow-up and evaluation. <u>Participants:</u> Downriver Area Vocational Consortium and United Auto Workers.

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State	Description
MICHIGAN	Source: W. Robert Schnieders, Director; Downriver Area Vocational Consortium; 26084 Erie Street; Flat Rock, MI 38134. UAW-GM TUITION ASSISTANCE PROGRAM. Laid-off General Motors employees who qualify may receive up to \$1,000 annually in refunds to pay for retraining. For a complete description, see Multiple Linkage Activities, Michigan, in this chapter.
MINNESOTA	UNITED AUTO WORKERS. The Minneapolis Area Vocational-Technical Institute is participating in the retraining of UAW members under the Job Training Partnership Act. See also chapter four on exemplary programs, Multiple Linkages, Minnesota. Participants: Minneapolis Area Vocational-Technical Institute and United Auto Workers. Source: William Lundell, Director; Minneapolis Area Vocational-Technical Institute; 807 Northeast Broadway; Minneapolis, MN 55413.
MISSISSIPPI	The AFL-CIO, through its Human Resources Development Institute, has collaborated with the Mississippi Division of Vocational and Technical Education in MDTA, CETA, and JTPA efforts at recruiting, training, and placing unemployed and displaced workers. For more information, see Multiple Linkage Activities, Mississippi, in this chapter.
MISSOURI	REGIONAL COMMERCE AND GROWTH ASSOCIATION. The program called for 1,000 persons who had lost their jobs in St. Louis to receive assistance in finding new jobs. Services provided by the college included testing, career counseling, job search and interviewing workshops, and interview referrals from a computerized list of openings. Designed in consultation with the New Spirit of St. Louis/Management Committee and the Private Industry Council, the program had wide support from employers in the city. Persons served were referred by previous employers, unions, or social service agencies.

SELECTED EXAMPLES

State	Description
MISSOURI	<u>Participants:</u> St. Louis Community College and various Labor unions. <u>Source:</u> Michael Maguire, Director; St. Louis Community College; Metropolitan Re-Employment Project; 5600 Oakland Avenue; St. Louis, MO 63110. FORD MOTOR COMPANY/ST. LOUIS COMMUNITY COLLEGE PROJECT. Ford Motor Company asked the St. Louis Community College to develop and implement a major portion of the needed on-site training prior to the introduction of new, state-of-the-art manufacturing technology to the auto industry. For a complete description, see chapter four on exemplary programs, Retraining the Unemployed/Displaced Worker, Missouri.

UPGRADING TRAINING

This involves skill training programs for journeymen and others who wish to upgrade their technical knowledge and skills or who need to upgrade their skills to keep current with technological changes. Many vocational institutions, especially at the postsecondary level, offer this type of training for union as well as nonunion workers.

SELECTED EXAMPLES

State	Description
DISTRICT OF COLUMBIA	EDUCATIONAL TRAINING AND RETRAINING PROGRAM. Journeymen, who may voluntarily enroll in these locally conducted programs, comprise about two-thirds of all participants. For a complete description, see Multiple Linkage Activities, District of Columbia, in this chapter.
IDAHO	JOURNEYMAN UPGRADING. The good, open communications that developed from the School of Vocational-Technical Education's delivery of related instruction in union apprentice programs helped to make possible a greater variety of linkages, such as upgrade training programs/courses for journeymen union members in a number of occupational fields. For more information, see Multiple Linkage Activities, Idaho, in this chapter.
MINNESOTA	VOCATIONAL UPGRADING. The St. Paul Technical Institute offers special upgrading programs, such as welding for plumbers. See also Multiple Linkage Activities, Minnesota, in this chapter. <u>Participants:</u> St. Paul Technical Vocational Institute and various labor unions. <u>Source:</u> Leon Linden, Director; St. Paul Technical Vocational Institute; 235 Marshall Avenue; St. Paul, MN 55102.
MINNESOTA	BRICKLAYERS. The Suburban Hennepin Area Vocational-Technical Institute offers upgrading programs for bricklayers and apprentices. See also chapter four on exemplary programs, Multiple Linkages, Minnesota.

STATE	DESCRIPTION
MINNESOTA	<u>Participants:</u> The Suburban Hennepin Area Vocational-Technical Institute and Bricklayers and Stone Masons. <u>Source:</u> William Mamel, Director; The Suburban Hennepin Area Vocational-Technical Institute; 1820 North Xenium Lane; Minneapolis, MN 55441. JOURNEYMEN. The St. Paul Technical Vocational Institute offers an upgrading program for journeymen. See also Multiple Linkage Activities, Minnesota, in this chapter. <u>Participants:</u> St. Paul Technical Vocational Institute and various labor unions. <u>Source:</u> Leon Linden, Director; St. Paul Technical Vocational Institute; 235 Marshall Avenue; St. Paul, MN 55102.
MINNESOTA	STEAMFITTERS. The Dakota County Area Vocational-Technical Institute offers journeyman upgrading for steamfitters. See also chapter four on exemplary programs, Multiple Linkages, Minnesota. <u>Participants:</u> Dakota County Area Vocational-Technical Institute and steamfitters. <u>Source:</u> David Schroeder, Director; Dakota County Area Vocational-Technical Institute; 1300 East 145th Street; Rosemount, MN 55068.
MINNESOTA	VOCATIONAL EDUCATION COMPREHENSIVE CONFERENCE. Upgrading workshops are a featured component of this annual conference. For a complete description, see Multiple Linkage Activities, Minnesota, in this chapter.

VOCATIONAL EDUCATION/TRAINING

This linkage activity involves cooperative arrangements between a vocational education institution and an organized labor group to provide vocational or technical skill training for youth and/or adults. Either union instructors or vocational education instructors may be employed to provide the classroom and laboratory instruction.

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State	Description
CALIFORNIA	LOS ANGELES DOWNTOWN HIGH SCHOOL FOR BUSINESS, FINANCING, AND MERCHANDISING. Representatives from 120 business and industrial firms, government, labor agencies, and community organizations actively participated in every phase of planning and implementation. This school serves students throughout Greater Los Angeles. It opened in the fall of 1981 with a pilot 10th grade class of 65, and will gradually expand to 1,200 students in 1984. A building was renovated to house the school--a restaurant, boutique, and credit union. Students also manage some school operations such as records and supplies. A student-operated bus service dispatches small vans to transport students to "learning stations"--off-campus sites for work experience and career exploration. Admission follows the integration formula by race and sex. There are no entrance tests. The Industry Education Council of California, a nonprofit organization joining business, organized labor, government, and schools, was instrumental in recruiting public and private sector representatives to plan the school. Twenty-five percent of students' time is spent on-site in work experience or career exploration. The school requires 160 hours of work experience. Placement on a job is required for graduation. The curriculum stresses oral and written communication skills; business Spanish is also required. The school has a dress code and no competitive interscholastic athletic program. The most difficult problem encountered is scheduling and maintaining a pool of about 800 business firms and public agencies to provide student learning stations. A manual detailing each phase of planning is available from the Los Angeles Industry Education Council. Participants: Los Angeles Downtown High School for Business, Financing, and Merchandising and various labor unions.

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State	Description
	Source: Henry Weiss, Executive Vice President; Industry Education Council of California; 1575 Old Bayshore Highway, Suite 106; Burlingame, CA 94010.
MARYLAND	THE BRAC TRAINING PROGRAM. Managed by the Brotherhood of Railway Clerks, this program provides valuable vocational instruction for Job Corps trainees. For a complete description, see Multiple Linkage Activities, Maryland, in this chapter.
MICHIGAN	THE HIGH SCHOOL STUDENT AND THE WORLD OF WORK. The objective of this program is to make the retired UAW members' expertise and knowledge available to vocational and technical students. For a complete description, see chapter four on exemplary programs, Multiple Linkages, Michigan.

WORKSHOPS/CONFERENCES

Workshops and conferences include a wide variety of short-term training programs including seminars, workshops, conferences, and other meetings. They provide forums for the exchange of ideas, information, and concerns among and between many vocational education, organized labor, apprenticeship, and business and industrial leaders. These programs have been sponsored by a wide array of federal, state, and local education and labor agencies.

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State	Description
GEORGIA	ATLANTA DREAM JAMBOREE. This exposition was conducted in May 1983 by the Atlanta Chamber of Commerce and the mayor's office. The purpose was to provide students with information about various jobs--what is involved, what an employer looks for in an applicant's qualifications, and how a student can get the training to qualify for the job. Exhibitors included representatives from apprenticeship programs, colleges, technical and proprietary schools, and several union locals. Also present was the Atlanta Coalition for Women in Nontraditional Jobs Outreach Program. The jamboree was attended by thousands of high school students who had the opportunity to speak with exhibitors about apprenticeship programs and other employment opportunities. <u>Participants:</u> Several educational institutions and various labor unions. <u>Source:</u> Sam Caldwell, Commissioner; Georgia Department of Labor; State Labor Building; 254 Washington Street, SW; Atlanta, GA 30334.
MICHIGAN	CAPITALIZING ON THE TRANSFERABLE SKILLS OF ADULT DISPLACED WORKERS. This workshop examined an innovative model for retraining displaced workers. It was developed through the cooperative efforts of the United Auto Workers, the Ford Motor Company, two community colleges, and other community-based organizations. It was held on November 9-10, 1983, in Detroit.

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State	Description
MINNESOTA	<u>Participants:</u> United Auto Workers, Henry Ford Community College, and Macomb Community College. <u>Source:</u> Elvin Hendricks, Coordinator for Special Projects; United Auto Workers; 8000 East Jefferson Avenue; Detroit, MI 48214. Stuart Bundy, President; Henry Ford Community College; 5101 Evergreen Road; Dearborn, MI 48128. James Blanz, Vice-President for Planning and Development; Macomb Community College; 14500 Twenty Mile Road; Warren, MI 48093. VOCATIONAL EDUCATION COMPREHENSIVE CONFERENCE. Since its start in 1929, this conference has afforded vocational educators and labor unions to meet and share ideas. For a complete description, see Multiple Linkage Activities, Minnesota, in this chapter.
MISSOURI	VOCATIONAL EDUCATION CONVENTION: St. Louis, Missouri, December 6-7, 1982. Featured as one of the convention highlights was a panel presentation on "High Technology and Robotics" and "High Technology, Vocational Education, and Retraining--A Labor Perspective." The panelists included representatives from the Wisconsin State AFL-CIO and the United Auto Workers. <u>Participants:</u> Various vocational education institutions and labor unions. <u>Source:</u> Dorothy Shields, Director of Education, Department of Education; AFL-CIO; 815 16th Street, NW; Washington, DC 20006.
NEBRASKA	NATIONAL VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT SEMINAR: Omaha, Nebraska, October 28-31, 1975. This seminar, the ninth in a series for vocational educators, was responsible for coordinating and conducting personnel development programs. The theme of this seminar was "Industry-Education Innovations in Personnel Development." Kenneth R. Edwards of the International Brotherhood of Electrical Workers gave a paper entitled "Labor Looks at Vocational Education." Numerous representatives from business, education, social, and governmental organizations also participated in the seminar.

SELECTED EXAMPLES

State	Description
	The six major objectives of the seminar were as follows: • Increase knowledge of personnel development models and strategies used in business and industry • Increase knowledge of selected industry-education cooperative programs for personnel development • Identify functional guidelines for the operation of selected industry-education cooperative programs of personnel development • Generate potential methods for increasing involvement of business and industry in pre-service and inservice personnel development programs • Increase knowledge of innovative strategies for planning instruction in personnel development programs • Increase information about available research and development products for use in personnel development programs These objectives were realized through a number of relevant presentations, panel discussions, special interest group meetings, and exhibits. All seminar activities were conducted and/or facilitated by a cadre of representatives from business, industry, education, labor, and other appropriate organizations and agencies. <u>Participants:</u> The National Center for Research in Vocational Education and the International Brotherhood of Electrical Workers. <u>Source:</u> Mark Newton, Associate Director; The National Center for Research in Vocational Education; The Ohio State University; 1960 Kenny Road; Columbus, OH 43210 and Kenneth Edwards, Director; Skill Improvement Department; International Brotherhood of Electrical Workers; 1125 15th Street, NW; Washington, DC 20005.

SELECTED EXAMPLES

State	Description
OHIO	BUSINESS-INDUSTRY-LABOR INPUTS IN VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT: TECHNICAL ASSISTANCE CONFERENCE. Thirty educational representatives from 10 states participated in this conference held in Columbus, Ohio, April 3-5, 1978. The conference objectives that guided the development of the program included the following: • Provide technical assistance needed by state team members to add to, refine, and finalize plans of action for increasing business, industry, and labor inputs into vocational education personnel development programs • Provide resource materials that will help state team members in implementing their plans • Provide resource persons who have experience and expertise in utilizing business-industry-labor inputs in vocational education personnel development • Facilitate the participants' using each other's experience and expertise as resources • Facilitate the reporting of the experiences and accomplishments of the participating states in involving business, industry, and labor in vocational education personnel development programs • Broaden the participants' understanding of the contributions that can be made by business-industry-labor inputs into vocational education personnel development • Broaden participants' awareness of what is being done to increase business-industry-labor inputs into vocational education personnel development • Facilitate substantive interaction between participants and guest speakers • Facilitate completion of plans of action The conference consisted of one keynote address that was followed by presentations, panel discussions, and team reports. Participants: The National Center for Research in Vocational Education and United Rubber Workers.

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State	Description
OHIO	Source: Catharine Warmbrod, Research Specialist; The National Center for Research in Vocational Education; The Ohio State University; 1960 Kenny Road; Columbus, OH 43210. ANNUAL CONFERENCE ON APPRENTICESHIP-VOCATIONAL EDUCATION LINKAGES. For a complete description, see chapter four on exemplary programs, Workshops/Conferences, Ohio.
OHIO	NATIONAL TRAINING FUND UNIVERSITY CENTER (NTF/UC). For a complete description of this program, which provides workshops for its regional coordinators, see chapter four on exemplary programs, Multiple Linkages, Ohio.
OHIO	MAKING PARTNERSHIPS WORK: CAREER GUIDANCE AND WORK RELATED EDUCATION AND TRAINING. Representatives of major business, organized labor, education, and government organizations jointly planned this national conference, which was held in Washington, D.C., November 7-8, 1983. The topics discussed included the following: • Working partnerships in career guidance--why? • Working partnerships in career guidance--how? • The UAW-Ford Motor Company National Development Training Center • Community collaborative career guidance programs • Information for career decision making • The AFL-CIO's Human Resources Development Institute • Women's needs and responsive career guidance programs • Small-group discussion: realizing the potential of career guidance Participants: The National Center for Research in Vocational Education and AFL-CIO.

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State	Description
RHODE ISLAND	Source: Harry N. Drier, Associate Director, Development Division; The National Center for Research in Vocational Education; The Ohio State University; 1960 Kenny Road; Columbus, OH 43210 and Dorothy Shields, Director of Education, Department of Education; AFL-CIO; 815 16th Street, NW; Washington, DC 20006. RESCHOOLING THE ADULT WORKER. This conference, held June 23-26, 1983, at the University of Rhode Island, addressed the issue of economic dislocation. Participants included representatives from the United Auto Workers, the Illinois AFL-CIO, the Manpower Assistance Program, the Operating Engineers, and the International Ladies Garment Workers Union. Participants: University of Rhode Island and United Auto Workers. Source: Nancy Blackman; University of Rhode Island; Transition Center; Kingston, RI 02881 and Arthur Shy, Director of Educational Programs; United Auto Workers; 8000 East Jefferson Avenue; Detroit, MI 48214.
WISCONSIN	APPRENTICESHIP CONFERENCE. This long-running, annual conference demonstrates the rewards of close cooperation between vocational education and a state-level AFL-CIO. Of particular interest are the resolutions passed by the conference in support of vocational education. For a complete description, see chapter four on exemplary programs, Multiple Linkages, Wisconsin.

TRAINING NEEDS ASSESSMENT

Training needs assessment involves the surveying of individual and group needs for training. Depending on the group involved, it may include an assessment of youth and adult skill training needs, instructor pedagogical training needs, administrator training requirements, or other education or training needs such as basic skills development. It may include the assessment of worker skill needs for upgrading or the retraining needs of displaced workers.

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State	Description
IDAHO	RETRAINING PROJECT. An important part of the retraining of the displaced workers who participated in the Boilermakers/School of Vocational-Technical Education program was the extensive needs assessment conducted by the school. For more information, see Multiple Linkage Activities, Idaho, in this chapter.
OHIO	INSULATION INDUSTRY'S NATIONAL APPRENTICE AND TRAINING FUND (IINATF). An essential part of IINATF's program development was the needs assessment conducted by the National Center for Research in Vocational Education. Potential participants were queried as to their needs and interests, and their responses formed the basis for major portions of the subsequent workshop. For more information, see chapter four on exemplary programs, Multiple Linkages, Ohio.
NEW YORK	DISTRICT COUNCIL 37 EDUCATION DEPARTMENT PROGRAMS. An assessment examination is required of all persons who wish to participate in the program of college-level courses for academic credit. For more information, see Multiple Linkage Activities, New York, in this chapter.

COURSE/PROGRAM EVALUATION

Course and program evaluation involves the assessment of apprenticeship programs, instructor and administrator training programs, and workshops and conferences to determine their effectiveness and efficiency in meeting client needs. Such course and program evaluations may also include assessments of the effectiveness of the instructional materials used.

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State	Description
HAWAII	HOSPITALITY EDUCATION INTERNSHIP. A significant feature of this apprenticeship program is that the participants keep a log that is regularly consulted in the ongoing evaluation of the trainees' progress and the effectiveness of the course. For a complete description, see Multiple Linkage Activities, Hawaii, in this chapter.
NEW YORK	PROGRAM ON NONCOLLEGIATE SPONSORED INSTRUCTION (PONSI). The purpose of this program is to review formal educational courses conducted by noncollegiate organizations nationwide and to make appropriate college credit recommendations for the courses evaluated. These organizations include business and industry, labor unions, professional and voluntary associations, government agencies, and other nondegree-granting organizations. The credit recommendations are intended to guide colleges and universities throughout the country in awarding credit at the undergraduate and graduate levels to persons who have successfully completed the courses. PONSI organizes a team of three subject matter specialists to evaluate a course presented by a noncollegiate organization. The evaluators are selected from colleges, universities, and the appropriate nonacademic organizations. Recommendations are based on a thorough evaluation process that includes site visits, review of all course materials, and discussions with administrators and teaching staff. Since 1974, some 1,600 courses offered by 150 organizations have been recommended for credit in such areas as accounting, apprenticeship training, art, banking, computer science, electrical engineering, hotel technology, secretarial science, and welding. Credit recommendations and course descriptions are published in <u>A Guide to Educational Programs in</u>

SELECTED EXAMPLES

State	Description
	<u>Noncollegiate Organizations</u>, which is available from the PONS office. The New York Regents began the program in 1974. See also College Credit/Degree, New York (REX), in this chapter. <u>Participants:</u> University of the State of New York Board of Regents and various labor unions. <u>Source:</u> Kevin Reilly, Director; Program on Non-collegiate Sponsored Instruction; Cultural Education Center; Albany, NY 12230.
OHIO	PAINTING, DECORATING, AND DRYWALL APPRENTICESHIP TRAINING INSTRUCTORS SEMINARS. An important aspect of these seminars, conducted by the National Center for Research in Vocational Education, was the thorough evaluation of all facets of the seminars. For a complete description, see Multiple Linkage Activities, Ohio, in this chapter.
OHIO	INSULATION INDUSTRY'S NATIONAL APPRENTICE AND TRAINING FUND (IINATF). For a complete description, see chapter four on exemplary programs, Multiple Linkages, Ohio.
OHIO	NATIONAL TRAINING FUND UNIVERSITY CENTER (NTF/UC). For a complete description of this program, which incorporates the evaluation of teaching materials, see chapter four on exemplary programs, Multiple Linkages, Ohio.

CAREER GUIDANCE/COUNSELING

This section contains descriptions of programs where vocational education and organized labor have worked together to provide improved and/or expanded guidance and counseling services for high school, postsecondary, and/or adult students. Unions often cooperate with vocational education agencies by assisting with job fairs and career days, by providing guidance materials, and by serving as lay advisors to students wanting to explore and to learn more about specific occupations from skilled tradespersons.

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State	Description
COLORADO	EMILY GRIFFITH OPPORTUNITY SCHOOL. The school provides interviews, employment information, and aptitude tests administered by qualified counselors for adult residents of Denver. This free service helps prospective and enrolled students select vocational, technical, or academic skill areas best suited to their aptitudes and interests. For a complete description of the school, see chapter four on exemplary programs, Multiple Linkages, Colorado.
DISTRICT OF COLUMBIA	ACTIVITIES OF THE INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS (IBEW). For a complete description of IBEW activities, see chapter four on exemplary programs, Multiple Linkages, District of Columbia.
ILLINOIS	TRI-COUNTY INDUSTRY/EDUCATION/LABOR COUNCIL. The council is an educational service organization primarily designed to make available community resource people from business, labor, industry, education, and the professions. For a complete description, see chapter four on exemplary programs, Multiple Linkages, Illinois.
KENTUCKY	THE BUSINESS-EDUCATION PARTNERSHIP RETRAINING PROGRAM. According to data obtained from the local office of the Bureau of Manpower Services, the unemployment rate in the Louisville area stood at about 10.3 percent in mid-1983. Of the unemployed persons, 13,000 to 15,000 fell into the dislocated worker category. A review of existing federal, state, and local programs revealed a

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State	Description
	lack of proper and adequate support and services for the dislocated workers. The Business-Education Partnership Retraining Program was subsequently conducted for 339 displaced workers in the Louisville area. The main target group was the dislocated workers from the Kentucky Truck Plant of the Ford Motor Company. The program assessed career interests and academic abilities of these individuals and offered them training that would enable them to be better prepared in their search for other gainful employment. This training included such areas as researching the job market, networking, preparing job resumes, and developing a career action plan. The program consisted of 5 1-week sessions, each week offering 25 hours of intensive career education. It was approved by the Department of Manpower Services for the Commonwealth of Kentucky and the UAW/Ford National Training and Development Center at Dearborn, Michigan. The total cost was \$50,000--\$15,000 from UAW/Ford funds and \$35,000 from JTPA Dislocated Worker funding. <u>Participants:</u> Jefferson Community College and United Auto Workers. <u>Source:</u> Patrick R. Lake, Associate Director; Jefferson Community College; 109 East Broadway; Louisville, KY 40202.

SCHOLARSHIPS, FINANCIAL AID, AWARDS, TUITION ASSISTANCE

This category of financial aid and other types of assistance primarily involves state and local unions that help youth and adults by providing needed financial assistance or other types of incentives such as awards for outstanding achievement or performance. Without such assistance some youth and adults would not be able to take advantage of needed education and training opportunities. The awards provided by the unions serve to motivate students of all ages to higher levels of achievement.

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State	Description
DISTRICT OF COLUMBIA	ACTIVITIES OF THE INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS (IBEW). For a complete description of IBEW activities, see chapter four on exemplary programs, Multiple Linkages, District of Columbia.
DISTRICT OF COLUMBIA	THE AFL-CIO GUIDE TO UNION-SPONSORED SCHOLARSHIPS, AWARDS, AND STUDENT FINANCIAL AID. This annual publication lists more than 2,000 scholarships that have a combined total worth of approximately \$2.5 million. Individual scholarships range as high as \$10,000. Qualifications--whether for union members, the general public, high school students, or adults--vary widely among the individual programs. Approximately 8,000 copies of the guide are distributed annually. The guide is free to AFL-CIO members, and sells for \$3 to nonmembers. Participants: AFL-CIO and various educational institutions. Source: Dorothy Shields, Director of Education, Department of Education; AFL-CIO; 815 16th Street, NW; Washington, DC 20006.
COLORADO	EMILY GRIFFITH OPPORTUNITY SCHOOL. Financial aid in the form of work-study grants enables students to cover training expenses by working part-time at the school. An effort is made to place work-study students in jobs that enhance their training. For a complete description of the school, see chapter four on exemplary programs, Multiple Linkages, Colorado.

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State	Description
GEORGIA	ATLANTA COALITION FOR WOMEN IN NONTRADITIONAL JOBS OUTREACH PROGRAM. One goal of the coalition is to establish a fund for the promotion of participation in vocational competitions, and for scholarships/grants. For more information see Multiple Linkage Activities, Georgia, in this chapter.
MICHIGAN	UAW-GM TUITION ASSISTANCE PROGRAM. Laid-off employees who qualify may receive up to \$1,000 annually in re-funds for tuition and compulsory fees. For a complete description, see Multiple Linkage Activities, Michigan, in this chapter.
MINNESOTA	UNION INITIATIVES. The Central Labor Council (CLC) and the Bricklayers and Stone Masons are represented on the Minneapolis Area Vocational-Technical Institute (AVTI) general advisory committee. The advisory committee meets at least eight times a year to review and help develop the school budget. The CLC president was "extremely helpful" in passing the bond issue for the new \$22 million AVTI building. The unions were also helpful in developing an emergency fund for students. And Minneapolis will have a new aviation center building through the help of the CLC president. See also chapter four on exemplary programs, Multiple Linkages, Minnesota. Participants: Minneapolis Area Vocational-Technical Institute; bricklayers and stone masons; and Minnesota AFL-CIO. Source: William Lundell, Director; Minneapolis Area Vocational-Technical Institute; 807 Northeast Broadway; Minneapolis, MN 55413.
MINNESOTA	SCHOLARSHIPS. The Vocational and Adult Education Department of the Duluth Public Schools has been presented with small amounts of scholarship money from three different organized labor groups, namely, the Carpenters Local 361, International Brotherhood of Electrical Workers, and the AFL-CIO Central Labor Body of Duluth. Source: Clifford H. Wiklund, Director; Vocational and Adult Education; Independent School District 709; Lake Avenue and Second Street; Duluth, MN 55802.

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State	Description
NEW YORK	FINANCIAL SUPPORT. Labor unions provide financial and support services to student vocational organizations on the local and state levels. Vocational educators recognize this support at their local and state meetings and conventions. Unions provide judges for contests for FBLA, DECA, VICA, FFA, and others. Unions also support scholarships for needy students in post-secondary occupational programs such as the one at the Schenectady General Electric Company. For more information, see chapter four on exemplary programs, Multiple Linkages, New York.
NEW YORK	DISTRICT COUNCIL 37 EDUCATION DEPARTMENT PROGRAMS. Workers under a job title covered by the fund are eligible to receive financial assistance when they attend an accredited college, university, or registered institution. Members may apply for reimbursement of up to \$175 per term for a maximum of three terms per academic year for tuition or registration fees. Reimbursement is available only where other benefits may not be applied. Only full-time employees are eligible, and prior approval for tuition refund is required. For more information, see Multiple Linkage Activities, New York, in this chapter.
VERMONT	SCHOLARSHIPS. This scholarship of \$200 is offered annually by the state labor council to anyone who qualifies for study at the Rutland Area Vocational Training Center. The final recipient is selected by the area training center from among applicants who live mostly in Rutland County. The \$200 may be applied toward the purchase of apprenticeship tools, books, or any other training-related expense. Participants: Vermont AFL-CIO and Rutland Area Vocational Training Center. Source: Tom Belville, COPE Director; Vermont State Labor Council, AFL-CIO; 149 State Street; P.O. Box 858; Montpelier, VT 05602 and Shirley Crowley; Rutland Area Vocational Training Center; Woodstock Avenue; Rutland, VT 05701.

STUDENT VOCATIONAL ORGANIZATIONS

This linkage activity involves labor union support in a variety of ways for the vocational student leadership development clubs such as VICA, FBLA, FHA, DECA, FFA, and others. The support often takes the form of providing judges for contests, personnel to help organize and operate various student activities, and various types of awards and recognition for student achievement.

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State	Description
DISTRICT OF COLUMBIA	ACTIVITIES OF THE INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS (IBEW). For a complete description of IBEW activities, see chapter four on exemplary programs, Multiple Linkages, District of Columbia.
MARYLAND	UNION REPRESENTATION ON STATE BOARD. Herbert Fishpaw, a representative of organized labor who serves on the Maryland State Board of Education, has been an active supporter of the state VICA Skills Olympics. See Multiple Linkage Activities, Maryland, in this chapter.

TEACHING/RESOURCE PERSONS

This involves union members serving as substitute teachers, regular instructors, and as subject-matter experts or resource persons for classroom related instruction, laboratory instruction, or on-the-job cooperative education or apprenticeship training. The union personnel may instruct students about either technical skills and knowledge or about the role and benefits of unions themselves.

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State	Description
DISTRICT OF COLUMBIA	SPEAKERS BUREAU. The AFL-CIO operates a national speakers bureau that is prepared to help interested organizations locate knowledgeable persons who would be available for speaking appearances. Most often requested subject areas include topics such as labor history, economic concerns, trade issues, current political and social issues, and occupational safety and health. Besides the national speakers bureau, local bureaus are operated by the state labor federations and the more than 700 central labor councils. <u>Participants:</u> The AFL-CIO and interested educational institutions. <u>Source:</u> Bill Lanxner, Director; National Speakers Bureau; AFL-CIO; 815 16th Street, NW; Washington, DC 20006.
MICHIGAN	THE HIGH SCHOOL STUDENT AND THE WORLD OF WORK. This unique program began as a substitute teaching service in the Wayne County schools. Retired United Auto Workers members were trained to fill temporarily vacant teaching positions. The retired workers offered vocational skills instruction to students and also taught minicourses in labor studies. For more information, see chapter four on exemplary programs. Multiple Linkages, Michigan.

CURRICULUM DEVELOPMENT

Curriculum development includes the design, development, field testing, and revision of curricular and instructional materials of many types and formats. It includes the development of instructor manuals, student guides, modules, workbooks, and various types of audio and visual instructional aides. Curriculum and instructional development has been sponsored and conducted by many joint labor-management training funds, by many secondary, postsecondary, and higher education institutions, and by many state department of education curriculum laboratories.

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State	Description
COLORADO	EMILY GRIFFITH OPPORTUNITY SCHOOL. As part of its ongoing linkages with labor unions in apprenticeship training programs, the Emily Griffith School provides program sponsors with curriculum development assistance. For a complete description of this program, see chapter four on exemplary programs, Multiple Linkages, Colorado.
DISTRICT OF COLUMBIA	ACTIVITIES OF THE INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS (IBEW). For a complete description of IBEW activities, see chapter four on exemplary programs, Multiple Linkages, District of Columbia.
DISTRICT OF COLUMBIA	HOW SCHOOLS ARE TEACHING ABOUT LABOR. This publication contains a collection of outlines and lesson plans assembled to help teachers, curriculum specialists, and students gain a better understanding of organized labor and its contribution to the development of modern American society. Designed for the middle-school grades, this book offers lesson plans for dealing with such topics as American history, the history of the labor movement, and the role of organized labor. The focus of the materials is on informing students and on generating projects and topics for discussion. <u>Participants:</u> The AFL-CIO and interested educational institutions. <u>Source:</u> Dorothy Shields, Director of Education, Department of Education; AFL-CIO; 815 16th Street, NW; Washington, DC 20006.

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State	Description
INDIANA	UNITED ASSOCIATION INSTRUCTOR TRAINING PROGRAM. After the fifth annual instructor training program, held in 1958, the United Association asked the university to provide an extended range of courses and workshops that would lead to special certification. To that end, a 5-year sequence of courses was cooperatively developed. For more information, see chapter four on exemplary programs, Multiple Linkages, Indiana.
MARYLAND	FROM HERE TO THERE: EXPLORING THE APPRENTICE-TO-JOURNEYWORKER CAREER LADDER WITH GIRLS AND BOYS IN GRADES 1-9: A MULTIMEDIA APPROACH. This series of curriculum modules that contains lessons and film-strips was designed to introduce elementary and junior high school girls and boys to the careers entered through apprenticeships and to emphasize that this is a future career option for girls as well as boys. Most children know very little about the more than 700 possible careers on the apprentice-to-journeymen career ladder. They tend to believe that women do not work in the apprenticeable trades and most people are not aware that the pay scale for these jobs is generally three to five time higher than for the traditionally female job categories. Another concern is that students do not make the school-to-work connection and do not understand that being able to read well and to know math and sometimes even physics are necessary skills for those who seek a place in the competitive, well-paid, increasingly technological trades. Participants: The Equity Institute; Communications Workers of America; International Union of Electrical, Radio and Machine Workers; Graphics Arts International Union; Human Resources Development Institute, AFL-CIO. Source: Mary Ellen Verheyden-Hilliard, Project Director; The Equity Institute; 4401 East-West Highway; Bethesda, MD 20814.
MARYLAND	GENERAL MOTORS TRAINING MATERIALS PROJECT. Essex Community College was asked by the General Motors plant management to develop curricula for training workers in the use of a new robotics system and in presenting a new benefits package. For a complete description, see chapter four on exemplary programs, Multiple Linkages, Maryland.

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State	Description
MINNESOTA	INSTRUCTIONAL MATERIALS FOR BUSINESS, INDUSTRY, AND LABOR. The Minnesota Curriculum Services Center provides curriculum/instructional materials and media in response to requests from business, industry, and labor. The center provides consultative and technical assistance relative to curriculum/instructional materials/media development, modification, and use. The Minnesota State Board of Vocational-Technical Education receives information from the center as to the tasks performed by a worker in a given occupation and the expectations of business and industry as to the worker's performance. The center acquires information from a statewide group of companies, associations, and unions. In cooperation with the Minnesota Department of Energy Planning and Development, the Minnesota Curriculum Services Center develops and disseminates materials and media to support energy-related workshops throughout the state. Participants: Minnesota Curriculum Services Center, Carpenters, Local 361, and other unions. Source: Joe Daly, Director; Minnesota Curriculum Services Center; 3554 White Bear Avenue; White Bear Lake, MN 55110.
MINNESOTA	HIGH TECHNOLOGY. The unions are credited with being helpful in developing curricula for high-technology instruction, among other important areas of cooperation. For more information, see Multiple Linkage Activities, Minnesota, in this chapter.
MINNESOTA	CONTINUING SUPPORT. The operating engineers were cited for their continuing support in developing curricula and working with apprentices. See also chapter four on exemplary programs, Multiple Linkages, Minnesota. Participants: Staples Area Vocational-Technical Institute and International Union of Operating Engineers, Local 49. Source: Stanley Edin, Director; Staples Area Vocational-Technical Institute; Staples, MN 56479.

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State	Description
NEW YORK	PLANNING FOR THE FUTURE. The purpose of these committees is to review and restructure occupational education curricula and instruction to ensure that they prepare students for future occupations. Each Instructional Futuring Committee includes two representatives from New York State United Teachers and one from the New York Education Association in its membership. The same component of union representation also exists on the Administrative Futuring Committee. For more information, see chapter four on exemplary programs, Multiple Linkages, New York.
NORTH CAROLINA	ELECTRICAL MANUALS. Representatives from organized labor and electrical contractors requested the assistance of the Department of Community Colleges in upgrading the training of electrical apprentices about 18 years ago. As a result of a joint effort, instructional manuals were developed for each year of the 4-year program. These manuals are periodically updated and are in use today. <u>Participants:</u> Department of Community Colleges and electrical contractors. <u>Source:</u> Robert W. Scott, State President; Department of Community Colleges; North Carolina State Board of Community Colleges; Raleigh, NC 27611.
OHIO	INSULATION INDUSTRY'S NATIONAL APPRENTICE AND TRAINING FUND (IINATF). The primary goal of IINATF has been to formulate and implement national policies on apprentice training. An important first step was the development of a National Standard Curriculum, a product developed under contract with the National Center for Research in Vocational Education. For more information, see chapter four on exemplary programs, Multiple Linkages, Ohio.
OHIO	LABOR AND CAREER EDUCATION: IDEAS FOR ACTION. This handbook offers detailed procedures for developing, targeting, and evaluating labor-education curricula, as well as model instructional units. The teaching units were a product of the collaborative efforts of teachers, curriculum specialists, career educators,

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State	Description
	university staff, and representatives from organized labor. For a complete description, see chapter four on exemplary programs, Curriculum Development, Ohio.

RESEARCH STUDIES

Research studies include various efforts by vocational educators, labor leaders, and others to conduct investigations to obtain data for decision making, program development, and evaluation of training programs. Most of the research studies conducted involve joint labor and vocational education programs and have been conducted by master's degree and doctoral students studying various aspects of apprenticeship training programs and related concerns.

SELECTED EXAMPLES

State	Description
FLORIDA	LINKAGE BETWEEN VOCATIONALLY TRAINED PARTICIPANTS AND INDUSTRY REGISTERED APPRENTICESHIP PROGRAMS. This study was conducted in response to the need for procedures in the area of social services that went beyond interventions by single agencies to an emphasis on interagency relationships. It was expected that such policies would help avoid inadequate, fragmented, and institutionally unilateral approaches to youth education, training, socialization, and transition services. The specific purpose of this research project was to develop a linkage between vocational education and structured apprenticeship programs that would enable vocationally trained participants--who possess the basic skills--to continue the necessary skill development required for the attainment of journeyman-level competency. Linkage at both the state and local levels is perceived as being necessary to accomplish this goal. The final report, published in August 1983, includes a literature review, a description of target agencies, a useful study of facilitators and barriers, and a plan for designing the linkage model, developing a sense of ownership for it, and finalizing the model. Some of the survey respondents were organized labor union members. <u>Participants:</u> Florida State University and various labor unions. <u>Source:</u> Hollie Thomas, Professor; Department of Educational Leadership; College of Education; The Florida State University; Tallahassee, FL 32306.

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State	Description
NEW YORK	APPRENTICESHIP RESEARCH: EMERGING FINDINGS AND FUTURE TRENDS. The conference "Apprenticeship Training: Emerging Research and Trends for the 1980s," April 30 and May 1, 1980, was the third in a series. The previous conferences took place in 1966 and 1973. These conferences were organized as vehicles for the wider dissemination of federally funded research on apprenticeship. They provided an opportunity to identify new issues and topics relevant to the formulation of public policy on apprenticeship. They also provided the opportunity for the various members of the apprenticeship community and the research community to meet face to face. The common purpose has been to provide a forum where federally funded research results could be aired, debated, and perhaps even hammered into appropriate public policy. Issues discussed included lessons from foreign apprenticeship systems, financial incentives for apprenticeship, apprenticeship issues from the federal perspective, innovations in industrial apprenticeship, and current developments. <u>Participants:</u> Several colleges and universities and various labor unions. <u>Source:</u> Briggs, Vernon M. Jr., and Foltman, Felician F. eds. <u>Apprenticeship Research: Emerging Findings and Future Trends.</u> Ithaca, NY: Cornell University, 1981.

INFORMATION SERVICES

Information services include the development, publication, and dissemination of a variety of newsletters, bulletins, periodicals, and other publications. They are designed to inform vocational education, labor, and other concerned persons of ideas, activities, and programs of interest in the training, retraining, and upgrading of youth and adults.

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State	Description
DISTRICT OF COLUMBIA	ACTIVITIES OF THE INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS (IBEW). For a complete description of IBEW activities, see chapter four on exemplary programs, Multiple Linkages, District of Columbia.
DISTRICT OF COLUMBIA	EDUCATION UPDATE. This bimonthly publication is the most comprehensive listing of labor activities available. It is published and widely disseminated as a service of the AFL-CIO, Department of Education. For a complete description, see chapter four on exemplary programs, Information Services, District of Columbia.
DISTRICT OF COLUMBIA	LABOR FILMS FOR USE IN ELEMENTARY AND SECONDARY SCHOOLS. These films are intended to illustrate the condition of organized labor in the United States from the earliest days to the present. Subjects include: apprenticeship programs for women; reflections on the history, present, and future goals of the AFL-CIO by the late George Meany; historical documentaries about selected labor unions; and others. Films were produced by various unions, a television station, and the U.S. Department of Labor. Rental fees range from \$5 to \$10. Other materials offered are <u>Films for Labor</u> , which is a pamphlet, and <u>New Films</u> , a brochure. Source: AFL-CIO; Department of Education; 815 16th Street, NW; Washington, DC 20006.
DISTRICT OF COLUMBIA	COOPERATION. This newsletter, published by the Service Center for Community College-Labor Union Cooperation (of the American Association of Community and Junior Colleges), May 1977 to July 1979, was intended to disseminate brief announcements of interest

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State	Description
	to persons involved in organized labor/vocational education linkages. Topics included curriculum development, labor studies programs, apprenticeship programs, pertinent legislative developments, and the like. News items were contributed by numerous labor unions, as well as other interested groups. The advisory board included representatives from the AFL-CIO, electrical workers, autoworkers, and machinists unions, and various community college presidents. <u>Participants:</u> American Association of Community and Junior Colleges and various labor unions. <u>Source:</u> James Mahoney, Assistant Vice-President for Federal Relations and Director of International Services; American Association of Community and Junior Colleges; One Dupont Circle, NW; Washington, DC 20036
DISTRICT OF COLUMBIA	PAMPHLETS AND REPRINTS. The AFL-CIO offers numerous titles, most of which are free of charge when 50 copies or fewer are ordered. The general categories of titles are collective bargaining, economics, unemployment, human rights, labor--general information, labor studies, public education, and other miscellaneous titles. A complete list and order form are available. <u>Source:</u> Jim Auerbach, Assistant Director, Department of Education; AFL-CIO; 815 16th Street, NW; Washington, DC 20006.
GEORGIA	ATLANTA COALITION FOR WOMEN IN NONTRADITIONAL JOBS OUTREACH PROGRAM. The coalition's community affairs committee was responsible for the public relations effort, which included promotional activities, a speakers bureau, and organizing special events. For more information, see Multiple Linkage Activities, Georgia, in this chapter.
OHIO	NATIONAL TRAINING FUND UNIVERSITY CENTER (NTF/UC). For a complete description of this program involving the use of a newsletters to promote instructional improvement, see chapter four on exemplary programs, Multiple Linkages, Ohio.

SELECTED EXAMPLES

State	Description
WISCONSIN	USAA SENTINEL. The United States Apprenticeship Association (USAA) is an organization of individuals concerned about apprenticeship. The idea was developed by the National Association of State and Territorial Apprenticeship Directors (NASTAD) after members of that organization had consulted extensively with their various labor-management councils. The <u>USAA Sentinel</u> newsletter was inaugurated because the necessity for an informed constituency concerned about apprenticeship had become apparent to program administrators, joint apprenticeship committee members, vocational school authorities, and state and federal apprenticeship agencies. Legislation and rules affecting apprenticeship at both the state and federal level have been all too often considered or enacted without the knowledge of a large number of the people who are concerned about apprenticeship in the nation. USAA does not take positions on any proposed legislation, focusing instead on keeping its members informed about proposed legislation related to apprenticeship in a context of protecting and bettering apprenticeship. The publication states that "In practice, advice and consultation [have been contributed by] labor and management people from a broad [occupational] spectrum." The official membership categories are: employer, journeyman, vocational education, state government, federal government, high schools, apprentice, and other (mainly construction trades apprentice coordinators). <u>Participants:</u> United States Apprenticeship Association and various labor unions. <u>Source:</u> Charles T. Nye, Director; United States Apprenticeship Association; P.O. Box 2689; Madison, WI 53701.

ADVISORY COUNCILS/COMMITTEES

The descriptions in this section identify and describe situations where organized labor has been actively involved in planning, conducting, and evaluating vocational education and apprenticeship programs through their membership on state and local advisory councils and committees, on joint apprenticeship and training committees (JATCs), or on state apprenticeship councils (SACs). The federal legislation authorizing vocational education requires that representatives of both employers and employees serve on mandated councils and committees but does not require that the employees be union or nonunion; hence, considerable variations exist from state to state and community to community in terms of how these councils and committees are structured.

SELECTED EXAMPLES

State	Description
DISTRICT OF COLUMBIA	ACTIVITIES OF THE INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS (IBEW). For a complete description of IBEW activities, see chapter four on exemplary programs, Multiple Linkages, District of Columbia.
MINNESOTA	UNION REPRESENTATION. Both the Minneapolis and the Dakota County Area Vocational-Technical Institutes have union representation on their advisory committees. For more information, see chapter four on exemplary programs, Multiple Linkages, Minnesota. <u>Participants:</u> Dakota County Area Vocational-Technical Institute and steamfitters. <u>Source:</u> David Schroeder, Director; Dakota County Area Vocational-Technical Institute; 1300 East 145th Street; Rosemount, MN 55068.
MINNESOTA	UNION REPRESENTATION. Union representatives have served on all craft-related advisory committees at the St. Paul Technical Vocational Institute. For more information, see Multiple Linkage Activities, Minnesota, in this chapter. <u>Participants:</u> St. Paul Technical Vocational Institute and various labor unions.

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State	Description
MISSISSIPPI	Source: Leon Linden, Director; St. Paul Technical Vocational Institute; 235 Marshall Avenue; St. Paul, MN 55102. EDUCATION COMMITTEE. Union representatives are typically involved at all levels of vocational education advisory committees in Mississippi. For a complete description, see Multiple Linkage Activities, Mississippi, in this chapter.
NEW YORK	ADVISORY COUNCILS FOR VOCATIONAL EDUCATION. Labor union representatives serve on the New York State Advisory Council for Vocational Education, on boards of cooperative educational services (BOCES), on local education agencies (LEA), consultant committees, and on local advisory councils (LACs) for occupational education. Some of the BOCES that have members from organized labor on their LAC are Cayuga, Oswego, Clinton, St. Lawrence, Hamilton, Oneida, Genesee, Wayne-Finger Lakes, and Cattaraugus. New York City has two labor leaders on its LAC. For more information, see chapter four on exemplary programs, Multiple Linkages, New York.
TEXAS	APPRENTICESHIP AND TRAINING ADVISORY COMMITTEE. The Apprenticeship and Training Advisory Committee (ATAC) coordinates many of the labor/vocational education linkages in Texas. The 26-member ATAC is made up of educators, employers, training directors, and bargaining agents for unions. The ATAC is credited with doing more to pull organized labor and vocational education together in the state than any other state law or committee. The membership of the ATAC is mandated by state law. Participants: Educators, employers, and union representatives as mandated by state law. Source: Paul Lindsey, Associate Commissioner for Occupational Education and Technology; Texas State Board of Education; 201 East 11th Street; Austin, TX 70701.

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State	Description
TEXAS	APPRENTICESHIP AND TRAINING ASSOCIATION. The Apprenticeship and Training Association of Texas has played a significant role in the state's continued linkages between labor and vocational education. The organization is comprised of apprenticeship training directors, educators, state and federal employees, and others who might be involved in apprenticeship. There are five chapters (Beaumont, Dallas, Fort Worth, Houston, and San Antonio) that conduct monthly meetings to discuss various issues concerning apprenticeship. <u>Participants:</u> Interested educators, labor union representatives, and others. <u>Source:</u> Paul Lindsey, Associate Commissioner for Occupational Education and Technology; Texas State Board of Education; 201 East 11th Street; Austin, TX 70701.
WASHINGTON	COMMUNITY COLLEGE. Labor is represented on all but a few of the more than 800 community college advisory committees. The State Board for Community College Education has interfaced with the State Labor Council and other labor organizations on several fronts during the past years. Linkages include labor studies courses, supplemental and upgrade training for the employed worker, and related training for individuals indentured as apprentices. <u>Participants:</u> State Board for Community College Education and various labor unions. <u>Source:</u> John N. Terrey, Executive Director; State Board for Community College Education; 319 Seventh Avenue, FF-11; Olympia, WA 98504.
WISCONSIN	STATE BOARD OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION (VTAE). Although the state law requires only that state and local advisory committees have employee representation from representative groups, such groups are exclusively interpreted to be organized labor unions. This is indicative of the breadth of cooperation between vocational education and organized labor in Wisconsin. The state board of VTAE, which is appointed by the governor, includes three members representing organized labor: one from the

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State	Description
	Milwaukee Central Trades and Labor Council AFL-CIO, one from the AFL-CIO, and one representing the United Auto Workers Industrial Trades. Mutual assistance between organized labor and vocational education goes back to 1911. At present, VTAE helps maintain the relationship through the School for Workers courses, trade extension courses, and preparatory vocational-technical programs and courses. <u>Participants:</u> Wisconsin State Board of Vocational, Technical and Adult Education and various labor unions. <u>Source:</u> Robert P. Sorensen, State Director; State Board of Vocational, Technical and Adult Education; 4802 Sheboygan Avenue, Seventh Floor; P.O. Box 7874; Madison, WI 53707.

STATE BOARDS

This linkage activity involves the appointment of one or more representatives of organized labor to the state policy-making body for vocational education. The federal vocational education legislation requires that representatives of employers and employees serve on such boards, but does not specify that the employee representatives need to be organized labor groups. Nevertheless, many states appoint one or more organized labor representatives to their boards because union leaders have important and useful perspectives on training a skilled work force and their membership constitutes a sizable percentage of the total work force in nearly every state.

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State	Description
COLORADO	STATE LEVEL REPRESENTATION. Representatives from labor groups are included on all state-level vocational education advisory committees that are organized by the staff at the state board office. The State Board for Community Colleges and Occupational Education contains one representative from organized labor; the nine governing board members are appointed by the governor and confirmed by the state senate. The state board staff and the colleges' instructional deans work closely with various unions. The board staff also works closely with the local private industry councils and labor representatives in the communities under the JTPA program to ensure institutional responsiveness for education and training. <u>Participants:</u> Colorado State Board for Community Colleges and Occupational Education and various labor unions. <u>Source:</u> Russell DeVriendt, Assistant Director; Planning and Human Resources; Community College Division; Centennial Building, Second Floor; 1313 Sherman Street; Denver, CO 80203.
MARYLAND	STATE LEVEL REPRESENTATION. Herbert Fishpaw of the Plumbers and Gasfitters, Local 48, represents organized labor on the Maryland State Board of Education. For a complete description, see Multiple Linkage Activities, Maryland, in this chapter.

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State	Description
MINNESOTA	STATE-LEVEL REPRESENTATION. Organized labor is represented on the State Board of Vocational-Technical Education. For more information about this state board, see chapter four on exemplary programs, Multiple Linkages, Minnesota.

COLLEGE CREDIT/DEGREE PROGRAMS

This linkage activity involves the granting of college credit toward a postsecondary associate degree or a baccalaureate degree for courses that have been approved by an accrediting agency. In several instances arrangements for dual enrollment have been made whereby apprentices receive credit for their related instruction and on-the-job training for both their apprenticeship program and for an associate degree program. These courses are frequently offered by a postsecondary institution and organized labor in cooperation with employer organizations.

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State	Description
NEW YORK	REGENTS EXTERNAL DEGREES (REX). The REX program was created by the New York Board of Regents for working adults who are unable to attend conventional colleges for reasons such as work and family responsibilities, distance from a campus, travel commitments, and frequent job transfers. With no residence requirements, REX programs currently enroll 22,000 adults drawn from every state in the United States. A REX program does not offer courses; rather, it accepts credits that are earned elsewhere and consolidates them on a master transcript for one of its associate or baccalaureate degrees. A REX program generally recognizes courses sponsored by employers, professional associations, unions, and other noncollegiate organizations provided that the courses meet three conditions, as follows: 1. They must be evaluated and recommended for college credit by either the New York Program on Noncollegiate Sponsored Instruction or the American Council on Education Program on Noncollegiate Sponsored Instruction. 2. They must have been successfully completed during the time period specified by the agency mentioned in item 1. 3. The subject matter must be applicable toward degree requirements. Since 1972, REX programs have awarded over 16,000 associate and baccalaureate degrees to adults throughout the world. REX programs are fully accredited and

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State	Description
NEW YORK	widely accepted by other colleges and universities. See also Course/Program Evaluation, New York (PONS), in this chapter. <u>Participants:</u> University of the State of New York and various labor unions. <u>Sponsor:</u> Carrie Getty, Liaison for Employers; University of the State of New York; Regents External Degree Program; Cultural Education Center; Albany, NY 12230. DISTRICT COUNCIL 37 EDUCATION DEPARTMENT PROGRAMS. This was the nation's first joint labor union-college campus. For a complete description, see Multiple Linkage Activities, New York, in this chapter.

LEGISLATION DEVELOPMENT

The descriptions contained in this section identify states wherein organized labor and vocational education have worked collaboratively to sponsor state level legislation and appropriations that would improve and/or expand the vocational education and apprenticeship offerings available to the youth and adults of that state. Also cited are examples where national labor unions have given testimony and provided other types of leadership support for improved vocational education and apprenticeship legislation and financial support at the federal level.

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State	Description
DISTRICT OF COLUMBIA	POSITION PAPER: VIEWS OF THE AFL-CIO ON VOCATIONAL EDUCATION. The following excerpts are taken from a position paper read before the House subcommittee on May 18, 1983. The paper opens with a historical summary of the AFL-CIO's support for a curriculum of vocational education in 1909. In a call for present-day educational reform, the statement argues that "such reform should be equally directed toward adults and students in the secondary vocational education system. Too often, [secondary schools] students have been offered reduced academic opportunities replaced by specific skill training which limits their future employability to low-skill, low-paying jobs." The AFL-CIO believes that secondary students should continue their core academic subjects while at the same time receiving broad, general skill training with adaptive skills. Vocational education should be held to the highest possible standards in both the practical and academic education offered to students. The AFL-CIO particularly urges federal support for programs that-- • address the particular needs of minority and inner-city youngsters for equal access to vocational education institutions; • encourage improved standards of performance for vocational schools; • offer the necessary resources for improved guidance counseling for students in the middle-school years to give students time to consider preparation for work in nontraditional areas;

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State	Description
DISTRICT OF COLUMBIA	• strengthen and improve implementation of sex equity provisions; • seek to improve resources available for teacher preparation, retraining, and retention; and • provide adequate funding levels for the purchase of new equipment and upgrading in response to technological changes. "Vocational education, to be successful, must be a joint effort of educators, federal, state, and local government, and labor and industry. . . . According to the National Institute of Education's study on vocational education, coordination is taking place at the state level but it has had little impact on program decisions at the local level. . . . It is important that representatives of the appropriate labor unions or state and local councils of organized labor provide input concerning what courses or programs ought to be offered. "Most recently, the AFL-CIO Executive Council at its February 1983 meeting approved a statement on education calling for a 'substantive leadership program to enable the nation's public education system to educate and retrain America's current and future work force'." The statement also called upon the Congress to reject administration efforts to reduce federal financial aid to vocational education. <u>Participants:</u> AFL-CIO and vocational education in general. <u>Source:</u> Submitted statement of the American Federation of Labor and Congress of Industrial Organizations before the Elementary, Secondary, and Vocational Education Subcommittee of the House Education and Labor Committee on Vocational Education; May 18, 1983. ACTIVITIES OF THE INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS (IBEW). For a complete description of IBEW activities, see chapter four on exemplary programs, Multiple Linkages, District of Columbia.

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State	Description
DISTRICT OF COLUMBIA	STATEMENT READ BEFORE THE U.S. HOUSE OF REPRESENTATIVES. In a statement read before the House Subcommittee on Elementary, Secondary, and Vocational Education on May 18, 1983, Mr. Cole, vice-president of the American Federation of Teachers, made the following assertions regarding the proposed reauthorization of the Vocational Education Act: • It is imperative that the federal program be maintained and strengthened. • Vocational education is a legitimate and essential function of the federal government. • The American Federation of Teachers (AFT) believes that the standards of quality must be raised in vocational education. • To improve the quality of instruction, the standards of teacher certification should be upgraded. • The AFT opposes the Administration's proposals to convert vocational education into a block grant to the states or to consolidate it with adult education. • Vocational education must be sensitive to the needs and opportunities of local labor markets. • The AFT is opposed to any inclusion in federal vocational legislation of business tax write-offs for training. • A program linkage that should be improved is between vocational education and union-related apprenticeship programs. • The AFT believes there must be a substantial increase in federal funding for vocational education. • The AFT also believes that additional funds should be made available for financial aid to postsecondary vocational education students. <u>Participants:</u> American Federation of Teachers and vocational education institutions. <u>Source:</u> Paul Cole, Vice-President; American Federation of Teachers; 11 Dupont Circle, NW; Washington, DC 20036.

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State	Description
MINNESOTA	LEGISLATIVE SUPPORT. The Minnesota AFL-CIO, under the direction of President David Roe, has been one of the strongest supporters of the state's area vocational-technical institutes. He has on numerous occasions served as chairperson of statewide vocational conferences, and his testimony before the state legislature has been very instrumental in the upward progress of the total vocational system. The goal has been to preserve the identity of vocational education at a time when there was a movement to merge the vocational education board with the community college board. See also chapter four on exemplary programs, Multiple Linkages, Minnesota. <u>Participants:</u> Minnesota AFL-CIO and various vocational institutions. <u>Source:</u> David Roe, President; Minnesota AFL-CIO; 175 Aurora Avenue; St. Paul, MN 55103.
WISCONSIN	SUPPORT FOR VOCATIONAL, TECHNICAL, AND ADULT EDUCATION (VTAE). A fair measure of the state AFL-CIO's strong support for vocational education in Wisconsin are its recent public resolutions issued as part of an effort to affect state legislation beneficial to VTAE. One example would be the seven resolutions passed at the Wisconsin AFL-CIO's state convention in 1982: • Opposing any increase in the percentage of tuition or fees for students in the VTAE system • Supporting continued cooperation between the VTAE and high schools within parameters that will not weaken or threaten the postsecondary and adult offerings • Supporting actively the current governance system of VTAE in Wisconsin • Supporting full funding at the 35 percent level for the Wisconsin VTAE system • Supporting and, where necessary, expanding programs and services in the Displaced Homemakers Program • Supporting the appointment of qualified, truly representative labor members on local VTAE boards

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State	Description
WISCONSIN	• Reaffirming the VTAE system's unique role in economic development and asking the legislature's recognition of the VTAE system as a major contributor to the skilled work force in Wisconsin For further information about linkages between the Wisconsin AFL-CIO and the state VTAE, see chapter four on exemplary programs, Multiple Linkages, Wisconsin. APPRENTICESHIP CONFERENCE. This long-running conference provides a prime example of the benefits to vocational education that result from close collaboration with organized labor at the state level. A number of resolutions drafted by the 1984 conference endorsed specific vocational education issues. For a complete description of the Wisconsin Apprenticeship Conference, see chapter four on exemplary programs, Multiple Linkages, Wisconsin.

MULTIPLE LINKAGE ACTIVITIES

This category of linkage involves states or institutions where two or more types of substantive linkage are occurring within the same institution or agency. This type of multiple linkage occurs in many states and vocational institutions. It appears that successful linkage in one area often leads to cooperation between vocational education and organized labor in other areas of endeavor.

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State	Description
DISTRICT OF COLUMBIA	EDUCATIONAL TRAINING AND RETRAINING PROGRAM. Since its beginnings in 1966, this program has become the primary educational system for craftsmen in the graphic arts. It provides retraining for workers whose skills have become obsolete, upgrades journeymen skills, and offers complete training for apprentices. Apprentices are required to attend the locally conducted programs; journeymen attend voluntarily. Approximately one-third of the enrollments are apprentices, the remainder journeymen. The Graphic Communications International Union (GCIU) operates educational programs in 60 cities in the United States and Canada. Annually, some 2,000 to 3,000 persons are enrolled, for a total of 17,000 trained thus far. The GCIU offers guidance and assistance to locals that jointly establish programs with employers. The GCIU educational department provides the necessary training manuals and course materials developed by its own writers and graphic artists. It also conducts periodic educational seminars designed to assist those responsible for local educational programs. Instructors for local programs are craftsmen employed in the industry selected on the basis of their skills and their ability to communicate effectively. Instructors are trained in teaching methods. Classes are conducted in 3-hour sessions once each week throughout the 17-week semester. Most courses consist of 4 semesters conducted over a period of 2 years. Because the graphic arts industry varies in activity from city to city, local programs have flexibility in

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State	Description
GEORGIA	meeting local needs. Courses may be offered through the following: • Private schools--a complete facility that is leased or owned by the program trustees for exclusive use by the local program • Management's plant facilities--used during nonproduction hours • Vocational schools--where facilities are set aside for exclusive use by the local program • Other arranged facilities <u>Participants:</u> Graphic Communications International Union, various vocational schools, and others. <u>Source:</u> Walter Lypka, Educational Director; Technical and Occupational Training; Graphic Communications International Union; 1900 L Street, NW; Washington, DC 20036. ATLANTA COALITION FOR WOMEN IN NONTRADITIONAL JOBS OUTREACH PROGRAM. The coalition of labor, education, and business groups was established to develop awareness and enhance training for women in nontraditional jobs in the Atlanta area. The coalition was expected to augment the policies of the Midtown YWCA, which provided services to women who sought to enter the mainstream of the work force. The state objectives were as follows: • Provide educational programs for employees, women, and the community at large, resulting in a greater awareness of the opportunities and resources available • Provide training to women and girls to enhance their ability to compete for nontraditional opportunities • Serve as a catalyst in identifying and eliminating systemic barriers to gender-free employment • Develop and provide resources for individuals and groups who further the nontraditional educational focus • Assist in the development of women-owned businesses in nontraditional areas

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State	Description
KENTUCKY	A search committee, responsible for developing a needs assessment agenda and program possibilities for the first year, was established; the search committee was also responsible for the development of financial resources, in-kind services, and for membership in the outreach program. A community affairs committee was responsible for seeing that the community understood why the program existed and what its contributions to the community would be. The committee was to publicize via the media, newsletters, brochures, and other means the program and services available; a speakers bureau identified and enlisted the support of individuals to speak on the roles of women in nontraditional jobs. The community affairs committee was also responsible for identifying and responding to requests for special programs. The resource committee accepted the recommendations of the search committee and operated a skill bank of female applicants who were viable candidates for nontraditional jobs. Annual donations of \$1,000 from the private sector provided scholarships, grants, and financial support for a nontraditional program at the secondary level to promote participation in the vocational competition for jobs in the nontraditional trades. <u>Participants:</u> Georgia Department of Education and Ironworker's Local 387; Atlanta Labor Council. <u>Source:</u> Loydie Webber; Georgia Department of Education; 1766 Twin Towers East; Atlanta, GA 30334. GREAT ONYX JOB CORPS CENTER APPRENTICESHIP TRAINING FOR DISADVANTAGED YOUTH. Disadvantaged urban and rural male youth aged 16 to 21 live in dormitories at the Job Corps Center. Trainees accrue a monthly allowance as well as a monthly readjustment benefit, which is paid upon completion of training. Programmed remedial instruction allows students to progress at their own rate. Instruction is delivered in 10-day segments divided into 3 days of remedial education and 7 days of skill training for those who tested high; the schedule might be reversed for those with low reading and math scores. Every 6 weeks each trainee's progress is reviewed by a Progress/Performance/Evaluation Panel.

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State	Description
IDAHO	Upon completion of the program, the trainee selects a job from a list furnished by the union. Trainees learn to pass the apprenticeship entry exams necessary to enter their selected trade. They are also encouraged to pass the general educational development (GED) test and to learn to drive a car. Upon completing the program, the trainee is provided with a set of basic tools at a discount price and transportation to the town where a job has been arranged. Trainees report to the local union representative and to the hiring contractor. Trainees then typically spend a year in on-the-job training. A noteworthy aspect of this program is the use of instructors who themselves have been disadvantaged as youths. This allows for greater trust and effectiveness between instructor and trainee. <u>Participants:</u> Great Onyx Job Corps Center and Bricklayers, Carpenters, Operating Engineers, Painters, and Plasterers Union. <u>Source:</u> Great Onyx Job Corps Center; Mammoth Cave National Park, KY 42259. DISPLACED WORKER SERVICES. Linkages between the Idaho School of Vocational-Technical Education and organized labor began with delivery of the traditional, related instruction for a variety of union apprenticeship programs. Through those linkages the school was able to develop good, open communications with organized labor, which in turn led to expanded linkages such as upgraded training programs for journeymen union members. Of particular interest was the special cooperative programming between a local boilermakers' union, the area job service office, and the university's School of Vocational-Technical Education, which met the specific needs of a number of union welders when a plant closure situation developed in the area. Working with the local union, a meeting was arranged for all the employees who were to be displaced because of the plant closure. The job service office reviewed the benefits and services that could be provided through them. The vocational technical school reviewed what it could do in the line of training or retraining. It was arranged to have those welders who wanted the training to take part in an evaluation to determine where each one was functioning as to individual

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State	Description
MARYLAND	welding skills. Within a day or two of the general meeting, welders from the plant started making personal contact with the school and job service office regarding upgraded training in welding. The welding skills they had been using at the plant were limited. In order to be certified for welding jobs elsewhere, additional training/brush-up training was needed. Working closely together, the union, the job service office, and the school put a plan together. Specific jobs were identified and a training program was initiated. The majority of placements were made outside the state. <u>Participants:</u> Idaho State University, Boilermakers' Union, Local 520 and various other labor unions. <u>Source:</u> Gordon F. Jones, Manager; Trades Division and Division of Student Services; Idaho State University; School of Vocational-Technical Education; Pocatello, ID 83209-0009. STATE BOARD REPRESENTATION. The organized labor component of vocational education is represented on the state board of education by Herbert Fishpaw of the Plumbers and Gasfitters, Local 48. Fishpaw had previously served for 11 years on the Maryland Advisory Council of Vocational-Technical Education, and has helped implement Maryland's statewide administrator conferences. Another area of his involvement is the annual VICA Skill Olympics. Working with vocational-technical centers on their local skill olympics, Fishpaw and other union representatives assist in preparing the judging standards; top winners compete against winners from other states, principally in the building trades area--carpentry, plumbing, bricklaying. As chairperson of the Baltimore Building and Construction Trades Council, Fishpaw participates in career day presentations conducted by vocational educators. <u>Participants:</u> Maryland State Department of Education and Plumbers and Gasfitters, Local 48. <u>Source:</u> Addison Hobbs, State Director; Division of Vocational Education; State Department of Education; 200 West Baltimore Street; Baltimore, MD 21201-2595 and Herbert L. Fishpaw; Plumbers and Gasfitters, Local 48; 7814 Maple Avenue; Baltimore, MD 21204.

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State	Description
MARYLAND	THE BRAC TRAINING PROGRAM. This program trains and helps people get jobs with railroads and with other transportation employers. Disadvantaged youth who qualify may request the BRAC (Brotherhood of Railway, Airline and Steamship Clerks, Freight Handlers, Express and Station Employees) program when they enroll in the Job Corps. Trainees progress at their own pace. Intensive individualized instruction is offered in a number of practical subject areas such as English and business math and in specialized areas such as railroad and airline terminology, keypunch, and typing. BRAC operates training centers across the country. The trainee-instructor ratio is 20:1. The program is funded through Job Corps. Instructors are mostly BRAC members, although occasionally the program draws on teachers from secondary schools or junior colleges for language or secretarial skills instruction. The average Job Corpsmember spends about 8 months in the BRAC program. Enrollees are trained for clerical positions on the type of equipment used by railroads and other transportation employers. Trainees are also encouraged to acquire good work habits. Participants: Brotherhood of Railway, Airline and Steamship Clerks, Freight Handlers, Express and Station Employees and the Job Corps. Source: Rolland Forbes, Director of the BRAC Program; BRAC; 3 Research Place; Rockville, MD 20850 and Job Corps; U.S. Department of Labor; Employment and Training Administration; Washington, DC 20213.
MICHIGAN	UAW-GM TUITION ASSISTANCE PROGRAM. This jointly administered program was established for eligible, laid-off employees who have recall/rehire rights. Employees who wish to pursue retraining and education will receive prepared financial assistance for tuition and compulsory fees. By enabling qualified employees to complete or continue their education, the program improves their opportunities for reemployment within or outside the General Motors Corporation. A brochure describing the Tuition Assistance Plan was mailed to approximately 65,000 UAW-represented General Motors employees currently on layoff who had been identified

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State	Description
MINNESOTA	as potentially eligible to apply for assistance. The chief features of the plan are as follows: • A refund of up to \$1,000 per year for tuition and compulsory fees is available for approved courses at any accredited college. • Eligibility is determined by the UAW-GM Tuition Assistance Center. • Qualified applicants first select their courses, then the Tuition Assistance Center mails them a certificate detailing their selected courses and the amount of tuition approved. The employee presents this certificate to the college or university registrar or financial officer during registration. The college that wishes to participate in this program will honor the certificate and mail it to the UAW-GM Tuition Assistance Center for reimbursement. Applicants who live in states identified as guaranteeing a free high school education are encouraged to make use of the free vocational opportunities available in the schools as means of stretching their annual educational-retraining resources. Employees whose applications are not approved receive a letter explaining why their applications are not acceptable and suggesting how their applications may be satisfactorily completed. A toll-free telephone number (1-800-22 UAW GM) was established in Michigan for workers interested in the program; for those outside of Michigan the number is 1-800-GM UAW 11. <u>Participants:</u> United Auto Workers and various schools, colleges, and universities. <u>Source:</u> Arthur Shy, Director of Educational Programs; United Auto Workers; 8000 East Jefferson Avenue; Detroit, MI 48214. ST. PAUL TECHNICAL VOCATIONAL INSTITUTE (TVI). TVI has had strong support from organized labor, and many of the programs have excellent placement records for their graduating apprentices. Union representatives serve on all craft committees. TVI has a preapprentice program and related apprentice training. Unions donate equipment and supplies for programs. The

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State	Description
MINNESOTA	salaries of the apprentice training coordinators are subsidized by TVI. TVI has cooperated with unions on affirmative action programs, and it offers special upgrading instruction, such as welding for plumbers. In a unique approach to close cooperation between a vocational education deliverer and the unions, TVI makes office space available for the union training coordinators from the sheet metal workers, plumbing pipe fitters, and iron workers. <u>Participants:</u> St. Paul Technical Vocational Institute and various labor unions. <u>Source:</u> Leon Linden, Director; St. Paul Technical Vocational Institute; 235 Marshall Avenue; St. Paul, MN 55102. VOCATIONAL EDUCATION COMPREHENSIVE CONFERENCE. The conference provides participants with an important opportunity to display the quality of Minnesota products and the craftsmanship of its workers. Vocational education teachers are encouraged to become involved in the conference, to attend upgrading workshops, and to sign up for participation in the regional miniconferences. Some 2,500 teachers and administrators are expected to attend the 1984 event; the theme is "Vocational Education: A Total Focus." The 1983 conference theme was "Vocational Education: An Investment in Minnesotans." The conference traces its origin to the Minnesota Union-Industries shows that began in 1929. After cycles of activity and inactivity, the conference became an annual event in 1973. The Minnesota Vocational Association has been an ardent supporter of the conference; so has the state AFL-CIO, whose members have served on the board of directors. David Roe, president of Minnesota AFL-CIO, has served as guest speaker and as a participant in workshops during recent conferences. The AFL-CIO extensively promotes participation in the conference among its member labor organizations. A highlight of the 1983 conference was the presentation of awards to individuals "who have contributed significantly to the success of vocational education" in Minnesota.

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State	Description
MISSISSIPPI	<u>Participants:</u> Minnesota AFL-CIO and Minnesota State Board of Vocational-Technical Education. <u>Source:</u> David Roe, President; Minnesota AFL-CIO; 175 Aurora Avenue; St. Paul, MN 55103 and Paul M. Day, Chairperson; State Board of Vocational-Technical Education; 550 Cedar Street, Room 515A; St. Paul, MN 55101. STATE DEPARTMENT OF EDUCATION. The state vocational education system provides leadership, funding, technical assistance, and supportive services to local education deliverers and organized labor groups to promote the operation and development of vocational and technical education systems across the state. At the local level, linkages occur between unions and vocational education deliverers in the area of providing support services for the related instructional phase of registered apprenticeship programs. Union representatives are typically involved at all levels of vocational education advisory committees. The AFL-CIO, through its Human Resources Development Institute, has participated in MDTA, CETA, and JTPA efforts at recruiting, training, and placing unemployed and displaced workers. Organized labor has often worked with Job Corps programs through direct referral to and placement of Job Corps graduates in many occupations; such programs typically deal with disadvantaged youth aged 16 to 22. <u>Participants:</u> Mississippi State Department of Education and various labor unions. <u>Source:</u> James A. Reeves, Assistant State Director; Division of Vocational and Technical Education; State Department of Education; P.O. Box 771; Jackson, MS 39205.
NEW YORK	DISTRICT COUNCIL 37 EDUCATION DEPARTMENT PROGRAMS. The District Council (DC) 37 Campus of the College of New Rochelle was founded in 1972 as the first joint union-college campus in the nation. During its first 10 years more than 600 union members earned their baccalaureate degrees. In 1982, some 600 participants attended courses in three different programs: a morning program for retired members, an afternoon program

SELECTED EXAMPLES

State	Description
OHIO	for Family Service Paraprofessionals, and the original evening program open to all members of DC 37. Admission is limited to members of DC 37 who have a high school diploma or its equivalent. An assessment examination is also required of all entering students, not as an entrance examination, but a means of diagnosing students' needs in language arts and mathematical skills development. A set of entry-level seminars, along with a strong program of individual tutoring, helps students make the transition to college-level work. Support programs include Saturday morning activities for students and their families and feature lessons in dance, guitar, photography, and crafts; a nominal fee is charged. Day care is provided free of charge for students attending classes at the Park Place campus. The DC 37 Education Fund Library offers a circulating collection of materials. The DC 37 Education Fund administers a tuition refund program through which eligible members can receive financial assistance when they attend an accredited college, university, or registered institution. Members may apply for reimbursement of up to \$175 per term for a maximum of three terms per academic year for tuition and registration fees. Major areas of instruction offered by this program include: English as a second language, developmental skills (to aid college study), learning lab, typing and shorthand, stenotype, labor liberal arts for union women, safety/health training for the workplace, career development, and workplace skills. <u>Participants:</u> College of New Rochelle; Council 37 Educational Fund, AFSCME, AFL-CIO New York. <u>Sponsor:</u> Director of Student Advisement; College of New Rochelle; DC 37 Campus; 140 Park Place; New York, NY 10007. PAINTING, DECORATING, AND DRYWALL APPRENTICESHIP TRAINING INSTRUCTORS SEMINARS. The Painting, Decorating, and Drywall Apprenticeship Training Instructors Seminar Series began as six regional workshops conducted from March to August 1976. The conference sites were Seattle, Boston, St. Paul, Dallas, Los Angeles, and Chicago and were attended by a total of 275 participants. The objective of the seminars was

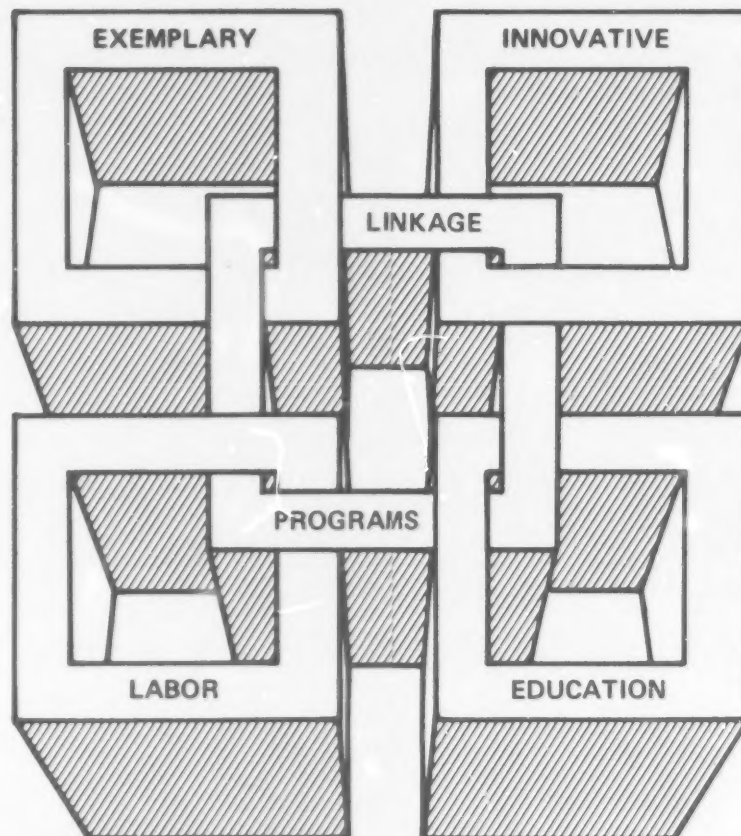
SELECTED EXAMPLES

State	Description
	to prepare the apprentice instructors to plan, organize, and teach the new capsule course training materials developed for apprentice classes beginning in autumn 1976. An important part of the 1976 seminars was the follow-up evaluation. The evaluations, gathered from the participants, were useful in improving the planning and promotion of future seminars and in identifying the needs or problems of instructors in local apprenticeship training programs. The usefulness of the first regional seminars was indicated by the three subsequent seminars conducted at the National Center for Research for Vocational Education in 1978, 1979, and 1982. The National Joint Painting, Decorating, and Drywall Apprenticeship and Training Committee's overall goal of improving apprentice and journeymen instruction led to the identification by the National Center of 3 seminar objectives for 1982: (1) to identify and assess apprentice instructors' pedagogical and technical needs and skills, (2) to develop 2 seminars for apprentice instructors--a 3-day seminar for beginning instructors and a 4-day seminar for advanced instructors, and (3) to evaluate existing apprentice curriculum materials. As with the 1976 regional seminars, the later annual seminars were thoroughly evaluated in order to assess their responsiveness to the apprenticeship and training committee's needs. <u>Participants:</u> The National Center for Research in Vocational Education and the International Brotherhood of Painters and Allied Trades. <u>Source:</u> Lucille Campbell-Thrane, Associate Director; The National Center for Research in Vocational Education; The Ohio State University; 1960 Kenny Road; Columbus, OH 43210.

CHAPTER IV

DESCRIPTION OF EXEMPLARY AND INNOVATIVE LINKAGE PROGRAMS

Many of the linkage activities described briefly in chapter three were considered to be exemplary or innovative in nature. A more comprehensive and detailed description of those selected programs is provided in this chapter. Particular attention is paid to the expressed purposes of the activity, the participants, the contributions made by each participant, the perceived benefits that resulted from participation, and the identification of elements considered to be critical to the success of the program. As in the previous chapter, programs are presented by linkage category and, within each category, alphabetically by state.



APPRENTICESHIP TRAINING

DISTRICT OF COLUMBIA

Program Title: The Washington, D.C. School of Apprenticeship

Participants: State Department of Education and various craft unions

Source: Dr. Otho E. Jones, Assistant Superintendent; State Department of Education; Career Development Programs; 415 12th Street, NW; Room 904; Washington, DC 20004

Description

This innovative school, which opened February 2, 1984, provides the related instruction for apprentices in four craft areas: carpentry, cement masonry, electricity, and plumbing. The school was created by the District of Columbia Board of Education, the Department of Employment Services, and the District of Columbia Apprenticeship Council. Its steering committee includes personnel from the state school system, the D.C. government, and representatives from organized labor and management.

The school is a component of the District of Columbia public school system. Participation is limited to residents of the District of Columbia who are presently employed in their area of study. Tuition fees are paid by the employer. Classes meet Tuesday and Thursday evenings from 6-9 p.m. Designed to accommodate 300 students, the school has enrolled about 25 in its first month. Trainees may choose between union-related and nonunion programs. Some union representatives are serving as instructors. The trainee/instructor ratio is about 7:1.

Contributions of Organized Labor/Vocational Education

The participating unions provide technical assistance and expertise in reviewing, modifying, and updating the curricula. The unions also provide their endorsement of selected instructors.

The school building, completely renovated for the new School of Apprenticeship, is outfitted with modern equipment, hardware, and software. Instructors' salaries are paid by the school system.

Benefits to Organized Labor/Vocational Education

Both local unions and vocational educators have benefited from cooperation on the school project. It is expected that future collaborations will develop as a result of the goodwill generated by this project.

APPRENTICESHIP TRAINING

ILLINOIS

Program Title: Kelly-Springfield Competency-Based Apprenticeship Training

Participants: Stephenson Area Career Center and several labor unions, including the rubber workers, machinists, pipe fitters, millwrights, and electricians

Source: Joel Scheider; Stephenson Area Career Center; Pearl City Road; Freeport, IL 61032

Description

Finding a lack of competent, skilled workers to draw upon and not having the resources to train them, the Kelly-Springfield Tire Company approached the Stephenson Area Career Center (SACC) with a request for assistance in developing a totally individualized competency-based apprenticeship program in various trades. This completely restructured the tire company's existing apprenticeship program. SACC administered the program. An advisory committee was composed of a SACC media coordinator, SACC curriculum developers/instructors, union representatives, and an on-site Kelly-Springfield training coordinator. The program, which was set up to accommodate 10 skilled trades employees, allowed for open entry and exit of participants. Enrollees contracted with instructors and progressed through the program at their own rate of learning--beyond a minimum of 2,000 hours. The longest training period lasted 14 months; the shortest, 11 months. Classroom training and some task mastery certification was conducted at SACC. On-the-job training and certification of product/performance evaluation was conducted at Kelly-Springfield.

Contributions of Organized Labor/Vocational Education

Union personnel served on the advisory committee, which met four times a year. Union stewards also worked with Kelly-Springfield management and engineers to compile "task lists" of skills to be acquired.

SACC produced all necessary video tapes, slide/tapes, and flip charts, and facilitated the use of its Learning Resource Center for trainees. SACC produced one student learning guide for each stated task, including necessary items such as support media, criterion exams, and product/performance checklist.

Benefits to Organized Labor/Vocational Education

In a time of rapid technological change, union members who have undergone competency-based apprenticeship training will have documented training and skills.

For SACC, the program represented the opportunity to develop new curricula and materials. SACC's Learning Resource Center now has a more extensive collection of video and reference materials.

Critical Elements

Labor and management have to accept the value of the training.

APPRENTICESHIP TRAINING

TEXAS

Program Title: Associate in Applied Arts and Sciences Degree: Electrical Construction Technology

Participants: North Lake College and International Brotherhood of Electrical Workers, Local 59

Source: Cliff Weaver; North Lake College; Technical/Occupational Programs; 5001 North MacArthur Boulevard; Irving, TX 75038

Description

This apprenticeship training program features an associate degree from the college as part of the requirements for certification. In the spring of 1980, North Lake College personnel met with members of the Dallas Joint Electrical Apprenticeship and Training Committee (DJEATC) to set up the program. The DJEATC consists of three representatives from the electrical workers and three from the local office of the National Electrical Contractors Association. The degree was designed so that six college credits were to be taken each semester to cover technical information--the related training--while the apprentice is employed and receiving manipulative training on the job. The curriculum is approved by the DJEATC. At the conclusion of 4 years of training, the trainee has earned 51 college credits toward an associate in applied arts and sciences degree in electrical construction technology. The instruction is completed after the trainee earns additional credit in English, psychology, social science, and one elective subject, for a total of 66 college credits. Approximately 20 students to date have completed all requirements and received the associate degree; 190 apprentices are enrolled, whereas 200 is the usual number.

Contributions of Organized Labor/Vocational Education

Union representatives, as members of the DJEATC, screen prospective trainees to determine those most suitable for the program. (Trainees selected must become affiliated with the DJEATC.) Some unions at the national level have developed curricula that then are turned over to the locals who may adapt them for local needs, as is the case with Electrical Workers, Local 59.

All apprentice training is conducted at the Electrical Training Center, which is owned by the DJEATC, with classrooms rented by the college. Instructors are employed by the college and treated the same as other part-time instructors; that is, they share basic requirements for employment, are subject to approval by the Texas Education Agency and participate in regular evaluations.

Benefits to Organized Labor/Vocational Education

A primary benefit for the electrical workers is increased credibility for union programs; this credibility can easily lead to a broader variety of linkages, such as upgrading for journeymen. The availability of college credit for apprentices encourages persons to participate in the program. North Lake College benefits from this type of linkage by daily involvement with industry, which is a valuable source of placement possibilities for students.

PREAPPRENTICESHIP TRAINING

IOWA

Program Title: School/Work Linkage Project

Participants: Des Moines School District and South Central Iowa Federation of Labor, AFL-CIO

Source: David L. Billings; Des Moines School District; 1800 Grand Avenue; Des Moines, Iowa 50307 and Harry Chapin, President; South Central Iowa Federation of Labor, AFL-CIO

Description

This project was developed by, and now serves, a single local school system. It was designed to develop apprenticeship opportunities for high school seniors (while in school) on a part-time basis. The goal is to provide full-time employment upon graduation as students continue their training with their initial employer. The student receives both academic and apprenticeship credit while in the project. About 30 students are enrolled each year. The availability of JTPA funds has coincided with an increased effort to recruit disadvantaged youth.

Contributions of Organized Labor/Vocational Education

South Central Iowa Federation of Labor President Harry Chapin is deeply involved in all phases of the program. The enthusiastic support of the labor organization is regarded as an important aspect of the project's success.

The school district contributes classroom space, audiovisual equipment, and support services and handles all indirect costs.

Benefits to Organized Labor/Vocational Education

Because many of the unions' rank and file are in their fifties, skilled replacements will have to be found to fill vacancies caused by retirement. The School/Work Linkage Project helps organized labor to identify and to participate in the training of prospective union members.

The school's course offerings are broadened and its career development efforts are improved by the project. The project director also feels that the school district benefits from increased linkages between the schools and the community.

PREAPPRENTICESHIP TRAINING

OHIO

Program Title: School-to-Apprenticeship Program

Participants: Ohio State Department of Education and various labor unions

Source: Darrell L. Parks; State Department of Education; Vocational and Career Education; 907 Ohio Departments Building; 65 South Front Street; Columbus, OH 43215

Description

The School-to-Apprenticeship Program utilizes the existing vocational systems to assist students in making the transition from school to apprenticeship as smoothly as possible. Senior high school students are placed in apprenticeship for approximately 4 hours per day during their final school year. All students are placed with employers who have registered apprenticeship programs, which enables students to earn full credit for the hours earned while participating in the program. The goal is full indentureship, as an apprentice, with the participating employer. Since 1977, Ohio has set up four of these programs, one each at the Cleveland City School District, Great Oaks Joint Vocational School District, Maplewood Area Joint Vocational School District, and the Northwest Local School District. Currently, 114 students are active in the programs.

Benefits to Organized Labor/Vocational Education

The program provides employment opportunities in the highly skilled occupations prior to graduation. Apprentices can expect to have more job security and generally to receive higher wages because of their prospective employment in the highly skilled occupations. All cooperative employment hours count toward the apprenticeship requirements. Students are able to earn wages during their senior year of school; this is seen as an attraction for members of the junior class.

The opportunity for employers to observe the students prior to making a full-time commitment is viewed as beneficial to both the employers and to the program.

RETRAINING THE UNEMPLOYED/DISPLACED WORKER

ILLINOIS

Program Title: Pre-Training of Unemployed Minorities: Women

Participants: State Community College, Cement Mason's Local 90, and Laborers' Local 100

Source: Rogers Connor, Director, or Rosetta Wheadon, President; State Community College; Vocational Technical Education; 417 Missouri Avenue; East St. Louis, IL 62201 or Dean Turner, Business Representative; Cement Mason's Local 90; 820 Lions Drive; Troy, IL 62294 and Ron Shevlin, Business Representative; Laborers' Local 100; 8205 Bunkam Road; Caseyville, IL 62232

Description

Because unemployment in East St. Louis stood at an all-time high in 1980, and a third of the families were headed by women, this retraining program was set up to train 20 women as cement mason apprentices or construction laborers. Both of the labor unions submitted letters of intent to enroll 10 women as trainees in the High Impact Training Services (HITS) program of the Illinois State Board of Education. The two unions, in accordance with the approved budget, submitted vouchers, receipts, time sheets, and so forth to State Community College. Training consisted of 4 weeks in class and 11 weeks on the job. In a departure for both the unions and HITS, the women trainees were recruited from outside the current work force.

Contributions of Organized Labor/Vocational Education

All training was done by qualified craft union inspectors at no cost to the program. It was also the duty of the instructor to use his influence to see that the graduates of this project were kept in reasonably steady employment at various contractor work sites.

The college provided classroom space and also administered the program's funds.

Benefits to Organized Labor/Vocational Education

Each union gained 10 new members with better-than-average earnings. The unions also received assistance for vocational training of new members.

The college had the opportunity to demonstrate its responsiveness to labor and minorities in the community. The program increased the access of labor and women to college.

Critical Elements

The HITS personnel approach each program as a catalyst. A willingness on the part of the two unions and the community college to cooperate from the start was essential.

RETRAINING THE UNEMPLOYED/DISPLACED WORKER

MISSOURI

Program Title: Ford Motor Company/St. Louis Community College Project

Participants: St. Louis Community College and United Auto Workers, Local 325

Source: Gwendolyn W. Stephenson; St. Louis Community College; 5801 Wilson Avenue; St. Louis, MO 63110

Description

In September 1983, the Ford Motor Company and the state of Missouri jointly awarded a \$583,000, 9-month contract to the St. Louis Community College to provide job retraining for 270 of Ford's Hazelwood Assembly Plant skilled trades maintenance journeymen and their supervisors. The introduction of new, state-of-the-art manufacturing technology to the auto industry has required extensive retraining for the employees who will operate and maintain Ford's newly modernized Hazelwood Assembly Plant. Plans call for retooling of the plant to make it one of the most modern in the nation. The company asked the community college to develop and implement a major portion of the needed on-site training. A task force of college faculty and staff and representatives from Ford and the UAW designed the customized training program. The selected company employees were provided with basic skills and learning styles assessment services by the college's Metropolitan Re-employment Project (MRP) and the Learning Achievement Center of the college's Forest Park campus.

The group of skilled trades journeymen included 100 electricians, 80 pipe fitters, 45 millwrights, and 45 toolmakers. They receive specialized small-group instruction in basic electronics, basic hydraulics/pneumatics, blueprint reading, computer applications, introduction to microprocessors, and millwright and toolmaking technologies. In addition, 15 of their supervisors are coming from the plant into the training center for individualized technical skill upgrading.

It is noteworthy that the National Alliance of Business recently chose the MRP as the best employment training program in the states of Missouri, Iowa, Kansas, and Nebraska, the first such award for that region. Also of interest is the fact that, although not in the original plan but as a result of company/college staff interaction, a select group of plant engineers and managers will also receive technical upgrading assistance in computers and microprocessors. It is further contemplated that a major instructional component for all plant workers will be planned to include such areas as human relations skills, stress management, motivation, time utilization, quality control, and effective communications. Finally, it is impressive to note the involvement of the significant number of public and private agencies that networked together to make this unique project possible. They are as follows:

- The Ford Motor Company

- The United Auto Workers, Local 325
- St. Louis Community College
- The Special School District of St. Louis County
- The Missouri Department of Elementary and Secondary Education
- The St. Louis Regional Commerce and Growth Association
- The Private Industry Council of St. Louis, St. Louis County
- The Governor's Office of Manpower Planning

Contributions of Organized Labor/Vocational Education

Through its Institute for Continuing Education, the college administers the required technical and human resources for this project. Instructors were obtained from existing college faculty, area vocational-technical schools, and the industrial community. A project management team was created to provide feedback and monitor training. This team includes the dean of the institute and its on-site project director, a representative from the Missouri Department of Elementary and Secondary Education, as well as Ford's assistant supervisor of plant engineering, four automation specialists, and the United Auto Workers' local union shop steward for the skilled trades journeymen.

Benefits to Organized Labor/Vocational Education

The UAW, Local 325, enthusiastically expects the high-technology training program to assist hourly employees in making the transition from old jobs to new jobs. The union sees increased job security as a milestone in union/management relationships. The new skills learned will be relevant to the new work, but will also be "personally enriching to the the core skills of each program participant," whatever his/her job. The union feels that this innovative and individually tailored program will provide prosperity and job security to its membership and will enrich the greater St. Louis community.

WORKSHOPS/CONFERENCES

OHIO

Program Title: Annual Conference on Apprenticeship-Vocational Education Linkages

Participants: The National Center for Research in Vocational Education and various labor unions

Source: Barbara Kline, Director of the National Academy for Vocational Education; The National Center for Research in Vocational Education; The Ohio State University; 1960 Kenny Road; Columbus, OH 43210

Description

In 1981, the National Academy for Vocational Education, the professional development unit at the National Center for Research in Vocational Education, initiated a series of annual conferences on apprenticeship-vocational education linkages. These meetings had a unique genesis and are still the only national forum of their kind. The major goal is to develop and strengthen the working relationship between the apprenticeship and vocational education systems in meeting the needs of the nation's work force. The forum provides an opportunity for those involved in apprenticeship training to join vocational educators in identifying problems that may hinder cooperation, and in discussing solutions to those problems. Issues are explored through relevant minipresentations, panel discussions, large and small groups, and exhibits. A cadre of representatives from the various interest groups serves as program presenters, group leaders, or facilitators where appropriate. Each year, the participation of nonvocational educators has increased.

The first meeting, conducted in collaboration with the Federal Committee on Apprenticeship, was held in Columbus, Ohio, at the National Center. In preparation, the National Academy conducted a survey of each state education agency to identify the persons(s) having apprenticeship liaison responsibilities. The findings led to the development of the first state-by-state directory of department of education/apprenticeship liaison personnel. The following organizations and agencies have been represented at the conferences: SEAs/LEAs, secondary schools, postsecondary and 4-year institutions, business, industry, labor, government, professional organizations, advisory councils, and other groups. The National Academy offers this program annually on a cost-recovery basis. Each year, a planning committee, which is usually established during the previous conference, provides suggestions and recommendations regarding the next conference.

Contributions of Organized Labor/Vocational Education

Through these conferences, vocational education is providing professional development programs for interested parties. The agendas have been designed

to address ways of establishing new linkages and strengthening existing ones between vocational education and apprenticeship training groups. The National Center, as a research institution, plays a central leadership and coordinating role in fostering this goal. It provides access to its resources and facilities as well as those of The Ohio State University. It provides national visibility for apprenticeship training in the United States, and its publications, curricula, and other information sources are available to help strengthen the capacity of both education and labor to improve vocational training.

Significant contributions being made to this effort by organized labor are in the areas of planning and presentations, supporting national conferences by attendance, and visibility for and promotion of these programs through their various media/communications channels and meetings.

Benefits to Organized Labor/Vocational Education

The start of the series marked the first time that interested parties had the opportunity to assemble and become acquainted with their counterparts nationally, to identify and discuss challenges in developing and/or strengthening apprenticeship-vocational education linkages collectively, and to share exemplary state and local programs/activities where working relationships between vocational education and apprenticeship currently exist.

CURRICULUM DEVELOPMENT

OHIO

Program Title: Labor and Career Education: Ideas for Action

Participants: Akron Public School and United Rubber, Cork, Linoleum, and Plastic Workers; Akron Labor Council

Source: Nicholas J. Topougis, Akron Public Schools; Career Education Programs; 70 North Broadway; Akron, OH 44308

Description

A handbook was prepared to help interested communities develop or expand the active involvement of labor in the educational process by providing specific examples of activities and procedures of labor-education collaboration. Teacher/training guidelines for developing and implementing labor-related educational activities are offered, along with extensive information regarding utilizing local labor staff and resources in curriculum development and staff training. The handbook helps educators to identify local spokespersons for labor on education or community matters, and to maximize the utilization of labor resources and expertise once they are identified. A separate section is devoted to the importance of labor-education inservice programs chiefly for educators, along with an outline of the process for developing such a program, including suggestions for workshops, seminars, agendas, inservice for credit, and evaluation criteria.

Representatives from the United Rubber Workers (URW), the AFL/CIO, Chemical Workers Union, Akron Public Schools, and The Ohio State University organized a Labor-Education Advisory Committee. The committee's first objectives included increasing communications between labor and the schools, placing students in direct contact with career people in organized labor, exposing students to organized labor's views on issues of the day, and providing assistance in planning and implementing programs for educators. As a result of the advisory committee's efforts a program was developed and implemented for high school students that provides 6 weeks of experience in exploring public relations and journalism at the URW headquarters, a summer work experience program for teachers, also at the URW headquarters, and classroom consultation by labor representatives in Junior Achievement projects. The advisory committee is responsible for planning all future labor-education curricula. The committee has also helped the career education staff in helping minority applicants enter industrial trades and in placing females in nontraditional employment. Specific aid is given to disadvantaged young people through a summer vocational exploration program; students are provided instruction and information by labor representatives.

The handbook offers detailed procedures for developing, targeting, and evaluating labor-education curricula, as well as model instructional units. The teaching units were a product of the collaborative efforts of teachers,

curriculum specialists, career educators, university staff, and representatives from organized labor.

Benefits to Organized Labor/Vocational Education

The handbook posits that when labor and schools collaborate to help young persons relate education to the real world, our entire society benefits. Students who are prepared to be constructive human beings--well adjusted, knowledgeable about how society operates, able to adapt to change--they become productive members of their community. Such preparation is not accomplished by schools alone; those in organized labor and the community at large must contribute the benefit of their experience and knowledge. In addition, an individual's sense of personal worth and direction is furthered as career education integrates work values with personal values leading to the choice of a desirable life-style. To that end, career education needs the experience and perspective of labor.

INFORMATION SERVICES

DISTRICT OF COLUMBIA

Program Title: Education Update

Participants: AFL-CIO and interested organizations

Source: Dorothy Shields, Education Director; AFL-CIO; Department of Education; 815 16th Street, NW; Washington, DC 20006

Description

Education Update, a bimonthly publication, promotes AFL-CIO-related events, resource materials, and professional activities of interest to union members and educators. The newsletter includes information about workshops; resources (films and tapes); materials; announcements, grants, and awards; and a calendar of AFL-CIO and other selected activities. Subjects dealt with include upcoming conferences on topical issues, such as asbestos exposure in the workplace, career education, and labor-education forums, as well as information about labor history, adult education, student financial assistance, and various economic issues.

Education Update is the most comprehensive listing of labor activities available. It is published and widely disseminated as a service of the AFL-CIO, Department of Education.

MULTIPLE LINKAGES: INSTRUCTOR TRAINING
APPRENTICESHIP TRAINING
CAREER GUIDANCE/COUNSELING
SCHOLARSHIPS, FINANCIAL AID, AWARDS, TUITION ASSISTANCE
CURRICULUM DEVELOPMENT

COLORADO

Program Title: Emily Griffith Opportunity School

Participants: Denver Public Schools and various labor unions

Source: Mary Ann Parthum, Director; Department of Adult, Vocational and Practical Arts Education; Denver Public Schools; 900 Grant Street; Denver, CO 80203

Description

Founded in 1916 as a provider of related instruction for plumbers, carpenters, bricklayers, and ironworkers, the Emily Griffith School is now Denver's area vocational school and has had a long-standing linkage with apprenticeship training programs. These registered apprenticeship programs are established on an as-needed basis and consist of both on-the-job training, where the apprentice learns the mechanics of the trade by working with journeymen, and related classroom instruction taught by a qualified journeyman in that craft. The school employs more than 80 full-time contract instructors, each fully credentialed in his or her field of expertise. In addition, the school employs more than 700 part-time instructors--many drawn from organized labor--who are credentialed and experienced in a specific area. The school offers basic curriculum development, instructor training classes, and procedures in lesson planning with classroom techniques to the apprenticeship sponsors. In recent years the school has provided training for as many as 35,000 persons annually in over 350 subjects; it utilizes more than 130 sites throughout the area as hands-on training centers, and has at its disposal more than 60 community advisory committees. New programs are constantly being developed.

Financial aid is available to students in the form of grants and work-study. Work-study participants earn money toward their training expenses by working part-time at the school. The financial aid office attempts to place work-study students in assignments that enhance their training. The school operates high school extension courses for juniors and seniors, as well as an adult high school that issues the regular Denver Public School high school diploma. Also offered is a full-time job placement service.

Qualified counselors administer aptitude tests, arrange for interviews, and provide employment information for interested adults. This service is provided free of charge to assist students and residents of Denver in selecting vocational, technical, or academic skill areas best suited to their aptitudes and interests. Services for handicapped students are provided by a vocational counselor and include scheduling full- and part-time training courses; working

with outside agencies dealing with handicapped persons; counseling with students on individual problems; conducting group conferences with teachers, students, and other personnel; working in that area of job development; and providing placement services to handicapped.

Contributions of Organized Labor/Vocational Education

Labor unions supply some of the materials and equipment for programs that they are sponsoring.

In addition to the contributions already mentioned, the Emily Griffith School provides classroom space and free transportation for students.

Benefits to Organized Labor/Vocational Education

Participating labor unions benefit by providing their new members with the high quality of training available from the Emily Griffith Opportunity School, as well as by enrolling their journeymen in upgrading programs at the school. Also of importance to the unions is the privilege of preselecting groups of students who already have made a commitment to the program.

The school benefits as an institution whenever it fulfills its mission to provide students with the best available vocational instruction. Apprenticeship training linkages maintained by the school encourage further linkages between vocational education, organized labor, industry, and business, which directly benefit the Denver community.

MULTIPLE LINKAGES: CAREER GUIDANCE/COUNSELING
SCHOLARSHIPS, FINANCIAL AID, AWARDS, TUITION ASSISTANCE
STUDENT VOCATIONAL ORGANIZATIONS
CURRICULUM DEVELOPMENT
INFORMATION SERVICES
ADVISORY COUNCILS/COMMITTEES
LEGISLATION DEVELOPMENT

DISTRICT OF COLUMBIA

Program Title: Activities of the International Brotherhood of Electrical Workers (IBEW)

Participants: International Brotherhood of Electrical Workers and various vocational education deliverers

Source: Kenneth Edwards, Director; Skill Improvement Department; International Brotherhood of Electrical Workers; 1125 15th Street, NW; Washington, DC 20005

Description

Almost since its beginning in 1891, IBEW has been involved in vocational education-related activities. Following is a listing of the major linkages that are presently occurring:

- The IBEW has been extremely active in most educational communities. Local union officers and members serve on boards of education and regents, advisory, and craft committees. International staff members serve on national advisory boards, commissions, and policy committees in the United States and Canada. Individual IBEW officials have served on as many as 17 different committees concerning vocational, career, and occupational education at one time.
- The IBEW has always been active in the American Vocational Association, and has been nominated for several awards. The union is also active in other industrial training and performance instruction organizations.
- The IBEW has, over the years, been a strong supporter of vocational education on the legislative front.
- The IBEW has been deeply involved at the national and local levels with student organizations, especially VICA. Everett Lehman of the IBEW staff serves as cochairperson of VICA's United States Skill Olympics Committee. Kenneth Edwards, director of the IBEW Skill Improvement Department, has testified on VICA's behalf to stress the importance of student organizations in vocational education.

- Employers with whom the union has collective bargaining relationships are encouraged to make use of public and private vocational education facilities.
- The IBEW annually offers to its members a maximum of 12 scholarships for university study leading to the baccalaureate degree in a wide range of fields. Many local unions also award scholarships to their members or their members' children.
- The international office has produced a series of films based on the IBEW. One such film, "Genesis of a Giant," tells the story of how a person can become a qualified electrician in the electrical construction industry through the apprenticeship program developed and recommended to local joint apprenticeship and training committees by the National Joint Apprenticeship and Training Committee for the Electrical Industry.
- IBEW has encouraged linkage between quality vocational education programs and some of its apprenticeship endeavors. The IBEW leads the nation in having the highest total number of apprentices registered with the U.S. Department of Labor, more than 1,000 individual programs covering over 30 occupational classifications within the construction, industrial, and service branches of the electrical industry.

Contributions of Organized Labor/Vocational Education

An estimated 95 percent of apprenticeship instructors in the construction crafts are IBEW members. The figure is generally lower for other crafts and trades. IBEW instructors serve on advisory committees at the local, state, and national levels. Educational materials developed for the annual VICA Skills Olympics are turned over to appropriate apprenticeship programs.

The vocational education deliverers typically contribute classroom space, audiovisual equipment, and other teaching materials, and they often serve as a resource for curriculum development projects.

Benefits to Organized Labor/Vocational Education

The expanded awareness resulting from IBEW/vocational education linkages has encouraged some IBEW members to enter vocational education as full-time or part-time instructors. IBEW feels that the entire membership benefits when future members receive proper vocational instruction in high school pre-apprenticeship programs.

MULTIPLE LINKAGES:

CAREER GUIDANCE/COUNSELING
ADVISORY COUNCILS/COMMITTEES

ILLINOIS

Program Title: Tri-County Industry/Education/Labor Council

Participants: Illinois Central College; several local education institutions and local labor unions are represented on the board of directors

Source: Paul B. Musgrove, Executive Director; Illinois Central College; Lincoln Hall; East Peoria, IL 61635

Description

The Tri-County Industry/Education/Labor Council is an educational service organization primarily designed to make available community resource people from business, labor, industry, education, and the professions whose goal is to expand career guidance services and vocational opportunities for young people. Services, provided free of cost, include the following:

- Volunteer community resource people who meet with students in the classrooms to discuss careers or job occupations
- Field trips to career-interest locations
- Individual student consultations with community resource people
- The Career Spectrum Program--computerized career information that assists high school counselors, students, and parents in career decision making
- An annual career information day for students
- Mini-career days focusing on selected departments or fields of study for middle and high school students
- Inservice workshops for educators
- Career education films, slides, books, and other materials
- Other educational services as requested

The council is open to outside proposals of any kind that promote and/or require cooperation or collaboration between industry, education, and labor.

Benefits to Organized Labor/Vocational Education

A firsthand view of career options is made available to nearly 80,000 area students in grades K-12. More than 12,000 community college students at Illinois Central College benefit from a computerized career information program and career information day. Nearly 5,000 teachers, counselors, and administrators receive help in securing resource persons and setting up workshops. And the community as a whole benefits by having students who are knowledgeable and interested in careers.

MULTIPLE LINKAGES:

INSTRUCTOR TRAINING
JOURNEYMAN TRAINING
CURRICULUM DEVELOPMENT

INDIANA

Program Title: United Association Instructor Training Program

Participants: Purdue University, United Association of Journeymen, and Apprentices of the Plumbing and Pipefitting Industry

Source: Max Eddy, School of Technology; Purdue University; Industrial Technology Building; West Lafayette, IN 47907

Description

This program traces its development to an international apprentice contest that was held at Purdue University in Lafayette, Indiana, in 1954. Since a large number of the apprentices' instructors were also present for the competition, it was felt that good use could be made of the opportunity to have the instructors contribute to the general skill improvement effort. In the years since, the project has flourished and now provides a permanent system of upgrading the United Association's instructional staff and the industry in general.

The annual instructor training courses last 1 week and take place every August. The first course had an enrollment of 65 apprentice instructors. Their instruction included formal classes, workshop sessions, and discussion groups on a variety of relevant subjects: principles of teaching and learning, lesson planning, effective teaching methods, and classroom and laboratory management. An effort was made to provide the apprentice and journeyman instructors with an array of theory and skills. The impact and popularity of the first course were not fully realized until the following years when enrollment increased markedly. Within 4 years, the enrollment had risen to 300, with many of the participants in previous courses coming back each August. After the 1958 session, the United Association asked the university to provide an extended range of courses and workshops that would culminate in a certificate. A revised curriculum comprising a 5-year sequence of courses was cooperatively developed.

By 1983, the annual training course had evolved into the most successful and best-attended program of its kind. Some 22,400 journeyman and apprentice instructors had enrolled and more than 2,000 had completed the 5-year curriculum. Its goals are as follows:

- To increase the United Association instructors' proficiency in the techniques of instructing and the use of instructional materials, particularly those prepared and/or recommended by the association

- To acquaint instructors with the philosophy and principles of education, especially trade, industrial, and technical education
- To provide learning experiences in the principles and the fundamentals of the applied knowledge subjects such as science, mathematics, drawing, and electricity
- To broaden and deepen the understanding of the instructors in the technical aspects of the crafts and bring information to the instructors about the latest developments in this area, as well as in the skills phase of the work of the United Association journeymen

Each enrolled instructor received 1 week (40 hours) of instruction for 5 years. The United Association encourages its local unions and instructors to plan for yearly participation in the program without a break until the 5-year program (and at least 200 hours) is completed. The 5-year program is divided equally into 2 main elements: (1) the professional element, dealing with the principles and techniques of teaching and (2) the applied and technical element, involving scientific and technical subject matter related to the trade. To be eligible for enrollment, an individual must have been approved and certified by the United Association as an active or prospective instructor in an apprentice or journeyman class or program sponsored by a local union affiliated with the United Association.

Contributions of Organized Labor/Vocational Education

Initially, the planning, facilities, and instructional staffs were provided by the Division of Conferences and the Department of Industrial Education of Purdue University in cooperation with the Training Department of the United Association. Presently, a third of the instructors are teacher educators from Purdue University, a third are top-rated technical instructors from the United Association, and a third come from associations closely connected with the pipe trades. Each member of the teaching faculty is required to evaluate the performance of each instructor trainee. Purdue University confers the title "certified instructor of journeymen and apprentices in the plumbing and pipefitting industry" upon those who satisfactorily complete the instructor training program.

The participants' expenses are paid by the local committees. However, at times when local committee funding is unavailable, instructor trainees have spent their own money and vacation time to participate in the program.

Benefits to Organized Labor/Vocational Education

A representative for the Industrial Education Department of Purdue University feels that this long-running program has helped keep the department attuned to the problems and needs of an important segment of the economy. In a case of success breeding success, the program has spurred the department to produce the best and most efficient delivery of training for the students. The program is transferable to other similar situations.

It is estimated that four-fifths of the instructors in the American division of the United Association have attended the training program. The benefit of this is that the union membership can participate in a continual series of upgrading technical and professional courses.

Critical Elements

The tradespeople often enter the program with an aversion to what they may regard as academic "fluff"; hence, the ability of the university instructors to relate to tradespeople effectively through a program of practical and useful courses was seen as essential. The logistics of managing the program required a competent production crew. And an important aspect of the continual success of the program was the evaluation of all participants and materials after each annual training program.

MULTIPLE LINKAGES:**INSTRUCTOR TRAINING
CURRICULUM DEVELOPMENT****MARYLAND**

Program Title: General Motors Training Materials Project

Participants: United Auto Workers and Essex Community College

Source: Joseph Testa, Associate Dean; Continuing Education and Community Services; Essex Community College; 7201 Rossville Boulevard; Baltimore, MD 21237

Description

A local General Motors Corporation plant was to be retooled to produce a new series of minivans. The instructional needs of the plant management included a program to explain to employees the new benefits package, equal opportunity policies, and insurance programs. United Auto Workers (UAW) officials needed instructional materials to explain the operation of new robotics that were to be used. Essex Community College was selected as the most favorable site for the training program, not only because of the competency of its faculty and its resources but also because the college campus could accommodate the 2,000 (mostly union) persons to be trained. Each week-long course trained either union instructors in the proper operation of the new robotics so that they could then train the rank and file, or it trained management employees in effectively delivering a presentation of the new benefits and policies package.

Contributions of Organized Labor/Vocational Education

Those project participants who will train the plant workers in the use of the robotics are UAW members. The enthusiastic support of the union was seen as providing much impetus to the successful completion of the project.

The community college supplied all necessary classroom space, educational materials, and support services.

Benefits to Organized Labor/Vocational Education

Trade unionism benefits when membership is trained in the latest technologies. Some workers who participated in the project developed a more positive appreciation for college instruction and felt more comfortable in a college classroom.

Projects such as this allow the college to provide better services to its community, local business, and industry. The college was eager to involve nontraditional groups of students in its program.

MULTIPLE LINKAGES:**VOCATIONAL EDUCATION TRAINING
TEACHING/RESOURCE PERSONS****MICHIGAN**

Participants: United Auto Workers and Wayne County Intermediate School District

Source: Arthur Shy, Director of Educational Programs; United Auto Workers; 800 East Jefferson Avenue; Detroit, MI 48214 and Wayne County Intermediate School District; 3350 Van Born Road; Wayne, MI 48184

Description

This unique 4-year-old program was initiated at the request of Wayne County Intermediate School District. The objective was to make the retired UAW members' expertise and knowledge available to vocational and technical students. UAW members visited classrooms at first as substitute teachers and later as part of a 13-hour labor studies sequence. Course content originally varied between vocational skills and labor studies. Recent layoffs of school teachers have somewhat curtailed the program. Instruction is now largely limited to labor studies. In addition to retired UAW members, presently employed UAW members are also being used. All UAW member teachers are trained in teaching methods, and a certified public school teacher is present for each class. The program was initially funded by CETA monies via the state's department of labor.

Contributions of Organized Labor/Vocational Education

All teaching materials, including visual aids, were developed and produced by the United Auto Workers.

The schools have contributed classroom space. Some schools have subsequently developed their own labor studies courses to supplement the UAW's efforts.

Benefits to Organized Labor/Vocational Education

Although the UAW feels that any representation of its position among secondary school students is beneficial, the union has primarily concerned itself with reaching students most likely someday to become union members. The unions see the world-of-work program as an important first step in acquainting students with the skills and realities of the workplace.

MULTIPLE LINKAGES: APPRENTICESHIP TRAINING
PREAPPRENTICESHIP TRAINING
RETRAINING THE UNEMPLOYED/DISPLACED WORKER
UPGRADING TRAINING
SCHOLARSHIPS, FINANCIAL AID, AWARDS, TUITION ASSISTANCE
CURRICULUM DEVELOPMENT
ADVISORY COUNCILS/COMMITTEES
STATE BOARDS

MINNESOTA

Participants: Minnesota Area Vocational-Technical Institutes and various labor unions

Source: Joseph J. Graba, State Director; Minnesota State Board of Vocational-Technical Education; Capitol Square Building; 550 Cedar Street; St. Paul, MN 55101

Description

Minnesota has 33 area vocational-technical institutes (AVTIs) serving more than 35,000 students and more than 200,000 adults. Adult trainees are involved in the extension program and are typically apprenticed in crafts. Representatives of central labor organizations and numerous local union personnel serve on advisory committees for programs in the AVTI system. State staff serve on the Minnesota Apprenticeship Advisory Council. Organized labor is represented on the Minnesota State Board of Vocational-Technical Education.

For more than 20 years, the Minnesota Department of Education, Vocational-Technical Division, has provided correspondence-related training for apprentices. This represents only one of the many innovative and exemplary practices carried out by the Minnesota AVTIs. Below is a representative sample of such programs.

The Minnesota State Board of Vocational-Technical Education takes pride in its excellent record of closely coordinated activities and programs with the Minnesota labor movement. The Minnesota AFL-CIO, under the direction of President David Roe, has been one of the strongest supporters in the state of the AVTIs. He has on numerous occasions served as chairperson of statewide vocational conferences, and his testimony before the state legislature has been very instrumental in the upward progress of the total vocational system. Many of the individual AVTIs serve as models for innovative or exemplary practices.

The Minneapolis AVTI has two labor representatives on its general advisory committee representing the Central Labor Council (CLC) and the bricklayers. The advisory committee meets at least eight times a year to review and develop the school budget. The CLC president was extremely helpful in passing the bond issue for the new \$22 million AVTI building. The unions were also helpful in developing an emergency fund for students, developing curricula for high-technology programs, and approving long-range plans for AVTI.

Minneapolis will have a new aviation center building through the help of the CLC president. The AVTI offers night programs for electrician and bricklayer apprentices. The AVTI is participating in the retraining of UAW members under JTPA.

The Dakota County AVTI has union representation on its advisory committees. Teamsters have been very active in truck driver programs. The IBEW serves on electric line worker programs, Local 114 on meat cutter programs, and retail clerks on supermarket programs. Dakota County AVTI has had preapprenticeship blueprint reading for female apprentices and journeyman upgrading for steam-fitters; they work with operating engineers and systems control electrician maintenance.

The Suburban Hennepin AVTI has apprentice programs for painters, decorators, carpenters, cabinetmakers, and sheet metal workers. Students build a full-scale house and sell it by bid. There is skill upgrading offered for bricklayers and apprentices.

The Staples AVTI has been internationally recognized for its heavy equipment operator programs. The International Union of Operating Engineers, Local 49, has been very supportive over the years in developing curricula and working with apprentices. This AVTI holds in excess of \$2 million worth of equipment in the field, providing hands-on training for the 120 students enrolled. Students are placed in jobs all over the country.

MULTIPLE LINKAGES: APPRENTICESHIP TRAINING
SCHOLARSHIPS, FINANCIAL AID, AWARDS, TUITION ASSISTANCE
CURRICULUM DEVELOPMENT
ADVISORY COUNCILS/COMMITTEES

NEW YORK

Program Title: New York State Linkage Activities

Participants: New York State Education Department and various labor unions

Source: James A. Kadamus, Assistant Commissioner; Division of Occupational and Continuing Education; State Education Department; Albany, NY 12234

Description

Following is an overview of the diverse linkage activities occurring in New York:

- Labor is represented on the New York State Advisory Council for Vocational Education.
- Labor union representatives serve on the state boards of cooperative educational services (BOCES), on local education agency (LEAs) consultant committees, and on many local advisory councils (LACs) for occupational education. Examples of BOCES that have members of organized labor on their LACs are Cayuga, Oswego, Clinton, St. Lawrence, Hamilton, Oneida, Genesee, Wayne-Finger Lakes, and Cattaraugus. New York City has two labor leaders on its LAC.
- LEAs and BOCES, in cooperation with local labor councils throughout the state, provide a variety of apprenticeship training programs for union members. BOCES operate such programs in several locations, including Oswego (carpenters union), Onondaga (welders), Cayuga (carpenters), Cortland (carpenters), St. Lawrence (iron workers and mason/bricklayers), and Wayne-Finger Lakes (masons). Examples of LEA apprenticeship training programs include Kingston (electricians) and New York City, where a variety of training programs funded with Vocational Education Act funds serve 2,046 union members at 13 sites.
- Labor unions provide financial and support services to student vocational organizations on the local and state levels. Vocational educators recognize this support at local and state meetings and conventions. Unions provide judges for contests offered by FBLA, DECA, VICA, FFA, and others.
- Ten regional education centers for economic development have been established in the state and are jointly funded by VEA and JTPA. Each center is governed by a board that is required to have union representation.

- Several short-term training programs for economic development, funded under VEA, have been specifically developed for organized labor, including autoworkers, restaurant workers, film editors, and film projectionists. Many other short-term training projects for economic development have the full support and participation of organized labor.
- Instructional Tutoring Committees (IFC) have operated over the past several years in New York State to restructure occupational education curricula and instruction to ensure that they prepare students for future occupations. There is union representation, by design, on all IFCs. Specifically, there are two New York State United Teachers (NYSUT) representatives and one New York Education Association (NYEA) representative on each IFC. Also, two NYSUT representatives and one NYEA representative serve on the Administrative Tutoring Committee.
- Unions provide scholarships for needy students in some postsecondary occupational programs (for example, the local labor council program at the Schenectady General Electric Company).

MULTIPLE LINKAGES:

INSTRUCTOR TRAINING
TRAINING NEEDS ASSESSMENT
COURSE/PROGRAM EVALUATION
CURRICULUM DEVELOPMENT

OHIO

Program Title: Insulation Industry's National Apprentice and Training Fund
(IINATF)

Participants: The National Center for Research in Vocational Education, the International Association of Heat and Frost Insulators and Asbestos Workers, and the National Insulation Contractors Association

Source: Lucille Campbell-Thrane, Associate Director; The National Center for Research in Vocational Education; The Ohio State University; 1960 Kenny Road; Columbus, OH 43210

Description

One of the primary goals of IINATF since its inception in 1971 has been the development of high-quality training materials. As part of the effort to attain this goal, the Training Fund contracted with the National Center for Research in Vocational Education in 1978 to initiate development of a national training program for apprentices in the insulation industry.

Contributions of Organized Labor/Vocational Education

Under that contract, National Center staff first developed a national standard curriculum detailing 19 competency areas in which training should be provided nationwide for apprentices in the insulation industry and 4 competency areas that may be included in apprentice training programs, depending on local needs. Second, National Center staff developed instructional materials for 2 training courses covering 2 of the 23 identified competency areas. Each course included competency-based apprentice materials as well as guidelines and instructional resources for the instructor.

To further its efforts to improve its apprenticeship training program, the Training Fund began a program of annual workshops for apprentice instructors. The first 2-day session was held on October 24-26, 1982, on The Ohio State University campus in Columbus, Ohio. It included 60 instructors, instructor-coordinators, and committee members representing the United States and Canada. The workshop had the following specific objectives:

- Familiarize participants with the content and purpose of instructor guides and apprentice workbooks developed by the National Center
- Modify local instructional programs to reflect a competency-based format

- Integrate existing and future instructor guides and apprentice workbooks into a regular instructional program for apprentices

These objectives were met through formal presentations and informal interaction among participants.

Participants at the 1983 workshop were divided into two levels for the first day: first-year (basic) and second-year (advanced, for those who had attended the 1982 workshop). On the second and third days, the basic and advanced participants met in a combined group to practice lesson planning skills and learn about selected teaching methods. Early in the preparations for the 1983 workshop a survey form was developed to assess the interests and needs of potential participants. Their responses on topics such as developing lesson plans, determining apprentice needs, testing, selecting reference materials, and motivating apprentices were used to form the basis for major portions of the workshop program. The final order of business of the 1983 workshop was to ask the participants to complete an evaluation form. The purpose of the evaluation was to obtain their reactions to the presentations, materials, and procedures of the workshop, and to invite open-ended comments to such questions as "Where do you see we should go from here?"

In 1983, the Training Fund and the National Center renewed their partnership in curriculum development. During 1983-84, two additional courses will be added to the array of competency-based apprentice training courses, which are expected to number 8 to 10 when eventually completed. As in earlier development efforts, National Center staff work closely with insulation mechanics and instructors to develop technically accurate and instructionally sound training materials.

MULTIPLE LINKAGES:

ADMINISTRATOR TRAINING
INSTRUCTOR TRAINING
WORKSHOPS/CONFERENCES
COURSE/PROGRAM EVALUATION
INFORMATION SERVICES

OHIO

Program Title: National Training Fund University Center (NTF/UC)

Participants: The National Center for Research in Vocational Education, Sheet Metal Workers' International Association, and the Sheet Metal and Air Conditioning Contractors' National Association

Source: Roy L. Butler, Senior Research Specialist; The National Center for Research in Vocational Education; The Ohio State University; 1960 Kenny Road; Columbus, OH 43210

Description

Initiated in 1973 and conducted on a continuing basis since that time, this project is designed to help improve productivity, employment, and training in the sheet metal and air conditioning industries. The NTF/UC has assembled relevant research, development, and training materials and transferred this information base to the NTF Washington, D.C. headquarters. It has conducted research on industry training and technological impacts on the industry, assisted with evaluating NTF apprentice workbooks and accompanying instructors' manuals, provided workshops for NTF regional coordinators; conducted workshops for joint apprenticeship and training administrators; conducted a multilevel instructor training program; and prepared a training tips newsletter to promote instructional improvements. Contracts (usually multiyear) are negotiated between NTF and The Ohio State University Research Foundation on behalf of the National Center for Research in Vocational Education to conduct these activities.

An exemplary aspect of this activity is the fact that all efforts are conducted in a highly professional manner and also embody "cutting edge" state-of-the-art approaches. For example, computerized videodiscs are being produced and used to increase the effectiveness of apprentice and journeyman instruction; videotapes are made of instructor training program participants and constructive critiques are made of the videotaped presentations by expert trainers to aid in the development of apprentice instructors. Instructor training program participants can elect to earn undergraduate academic credit from The Ohio State University for completing each of the five respective program levels. They are awarded a "certified instructor of apprentices and journeymen" certificate from The Ohio State University upon completing the final program. The NTF verifies that program participants come from fund-contributing areas and it also maintains control of the dissemination of all reports from the project. Articles on the NTF and NTF/UC activities have appeared in VocEd, the journal of the American Vocational Association; The Sheet Metal Workers' Journal; and the NTF Newsletter, which is distributed

to contributing areas in the United States and Canada. Reports of this linkage effort have been made at various local, state, national, and international conferences. It is now recognized as one of the most effective efforts in the country involving the resources and cooperation of a major university with a joint national labor and management organization.

The NTF/UC is sponsored by the National Training Fund for the Sheet Metal and Air Conditioning Industry, which is a joint program of the Sheet Metal Workers' International Association (SMWIA) and the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA).

Contributions of Organized Labor/Vocational Education

The contractors contribute to the NTF at a fixed cents-per-hour rate determined by the number of hours of work performed by SMWIA members. The NTF and local Joint Apprenticeship and Training Committees provide training equipment, materials, and industry experts; instructors and administrators for training in cooperation with employers from fund-contributing areas of the United States and Canada; and visibility and promotion through the Sheet Metal Workers' Journal, press releases, and various meetings in which SMWIA and SMACNA participate.

The National Center arranges for research, development, and training experts; provides coordination and leadership assistance coupled with the ability to intersect and acquire relevant assistance from the public and private sectors of vocational education and industry throughout the country; access to The Ohio State University and the National Center's resources and facilities; national and international visibility to the NTF and the sheet metal industry workers and management; and heightened capacities for both labor and management to improve training and employment opportunities.

Benefits to Organized Labor/Vocational Education

The sheet metal workers and union contractors benefit from the increasingly effective training for instructors of apprentices and journeymen. The assistance they receive in developing more highly skilled workers who can perform more effectively on the job is an important short- and long-range benefit, as is the increased self-esteem and ability to accommodate technological changes that continually impact on the industry.

The university-based national vocational education center is able to demonstrate that it can work successfully with a joint organized labor and employers' organization to provide a variety of mutually supported services to improve productivity, employment, and training in contributing areas of the United States and Canada. University-based personnel become increasingly knowledgeable and skilled at working cooperatively with organized labor and employers. As a result, greater awareness of their views and concerns are taken into account in other National Center project work.

Critical Elements

The sustained cooperation and determination of the organized labor and management of the sheet metal and air conditioning industry to anticipate change and to prepare workers for these changes by tapping various resources and expertise through adequately funded contracts have been crucial to the success of this program. Other critical elements have been the leadership that is made possible by merging the views and expertise of university and private sector experts, the long-term commitment of university personnel to the effort, and the sponsor's trustees, administrator, and administrative assistant who understand the industry, effective training strategies, and the university environment.

MULTIPLE LINKAGES:

**WORKSHOPS/CONFERENCES
LEGISLATION DEVELOPMENT**

WISCONSIN

Program Title: Wisconsin Apprenticeship Conference

Participants: Wisconsin Board of Vocational, Technical, and Adult Education and Wisconsin State AFL-CIO

Source: Arnold H. Potthast, Chief Supervisor of Vocational Education; Wisconsin Board of Vocational, Technical, and Adult Education; 4802 Sheboygan Avenue, Seventh Floor; P.O. Box 7874; Madison, WI 53707 and Jack Reihl, Secretary-Treasurer; Wisconsin State AFL-CIO; 6333 West Bluemound; Milwaukee, WI 53213

Description

This annual conference, begun in the 1950s, is presented alternately by the Wisconsin State AFL-CIO and the Wisconsin Department of Apprenticeship Training (under the Department of Industry, Labor, and Human Relations). The agenda is written by the sponsoring group to address current topics of concern to the state apprenticeship system. Recent conferences have addressed the increased educational requirement for many workers as a result of changes in technology and automation, the shrinking financial support for vocational education, impending relevant legislation, and pertinent economic issues. The spirit of close cooperation between organized labor and vocational education is evidenced by the following resolutions passed by the 1984 Apprenticeship Conference (sponsored by the state AFL-CIO):

- That the conference take action to encourage the state to remove any monetary limitations on vocational, technical, and adult education (VTAE) facility expansion (there is a statutory ruling that VTAE facility construction in excess of \$500,000 must be placed in referendum)
- That the conference take action to oppose legislation that would place the VTAE system in the position of having to increase program fees for all courses and programs, since statistics indicate that many students in the VTAE system's occupational programs are from working class families and families of lower socioeconomic levels and with limited financial means
- That the conference strongly support increased state funding to a statutory 40 percent level of aidable costs for the Wisconsin VTAE systems in its role in vocational preparation through apprenticeship and occupational education within its mission to labor, business, and industry

Contributions of Organized Labor/Vocational Education

The Wisconsin State AFL-CIO provides full sponsorship and preparation for the conference each biennium.

Normally the state director of education addresses the conference and then answers questions from the floor. Directors of area vocational-technical institutes also often address the conference, as well as conduct and participate in technical workshops.

Benefits to Organized Labor/Vocational Education

The annual conference engenders a spirit of cooperation, which helps ensure that instruction provided by vocational education is responsive to the union's needs. It also supports cooperation in curriculum development at the local level.

The vocational educators who attend the conference are exposed to new trends emerging in industry. Vocational education also benefits substantially from the resolutions passed during the conferences.

CHAPTER V

BARRIERS AND FACILITATORS TO LINKAGE

If this feasibility study was to result in recommendations on how vocational education could be improved through strengthened linkages with organized labor, it was apparent that the project should systematically identify the real barriers or deficiencies that are stymieing closer working relationships in many states and communities, as well as possible solutions to those problems. Hence, as a part of the project's data collection effort, everyone contacted, whether by telephone or letter, was asked to identify what he or she believed to be the barriers and some solutions to those barriers, or in other words, facilitators to more effective and harmonious relationships.

The respondents were generally quick to express their personal feelings and observations. This chapter summarizes the specific barriers identified and, where known, presents one or more facilitators that have been used successfully to overcome at least some of the barriers. Confidentiality of all responses was assured.

The various barriers are presented in a manner designed to capture the full meaning of the concern or hurdle being discussed. Many items are closely paraphrased, whereas others are presented as exact quotations. It is the opinion of the authors that some respondents have exaggerated to make their point and that others reflect personal opinions that may or may not be totally true or may be reflective of only the climate in their particular state.

The authors hope that, by the specific presentation of many of the views expressed, the real issues preventing closer cooperation can be dealt with effectively, at least in many cases. After each barrier statement, the position of the respondent is given in parentheses to provide the reader a better understanding of the viewpoint being expressed. The barriers identified have also been clustered into the following nine categories:

- A. Feelings of mutual distrust
- B. Problems involving communication
- C. Program control concerns
- D. Problems involving financial matters
- E. Concerns about trainee placement
- F. Concerns about program quality
- G. Concerns about research
- H. Lack of concern for training

The reader should note that some of the barriers are complex and of much greater significance than others. All of the views presented, however, are considered worthy of consideration and have implications for corrective actions that could be taken either to reduce or remove the barriers.

A. FEELINGS OF MUTUAL DISTRUST

Barrier 1--There is a pervasive suspicion among labor unions of academic institutions, including public schools and postsecondary colleges.
(state department educator)

One spokesperson stated that there is "a tendency among union members to consider universities as allied with corporate management." (university educator)

Another spokesperson stated that one of the major barriers was simply the "stereotyped perceptions that organized labor members have of university personnel and vice versa." (university researcher)

Barrier 2--Many times organized labor incorrectly perceives vocational education to be a threat to established apprenticeship programs, rather than a source of potential apprenticeship applications.
(state department educator)

Barrier 3--Some administrators and teachers believe that unions are hurdles that provide little worthwhile assistance. (researcher)

One respondent replied that "there is a sense of distrust of unions by educational administrators. Another weakness is that there is a sense of distrust of educators by union officials."
(community college director of apprentice programs)

Barrier 4--The vocational education system that organized labor helped to create has become competitive and hostile to the formal apprenticeship system. (national labor union official)

B. PROBLEMS INVOLVING COMMUNICATION

Barrier 5--Poor or limited communication exists between vocational education and organized labor leaders. (education dean)

Barrier 6--There is an overemphasis by school administrators on advisory committees as the sole technique for achieving organized labor cooperation. (researcher)

Barrier 7--Many secondary and postsecondary vocational schools do not provide any instruction on the existence of the AFL-CIO or other organized labor groups. (commissioner in department of labor)

C. PROGRAM CONTROL CONCERNS

Barrier 8--Many unions want to restrict the labor supply in ways that are contradictory to the goals of vocational education. (state department educator)

"The major barrier between organized labor and vocational education seems to be rooted in a labor concept of having first claim to specific areas of vocational education, particularly through the apprenticeship programs." (state department educator)

Barrier 9--Organized labor has traditionally sought to maintain control of the development of the curriculum as well as the selection of instructors for apprenticeship programs. (state department educator)

"Union leaders do not want nonunion personnel to teach in their apprenticeship programs." (state department of education official)

"About all the institution has been able to provide is the physical facilities and some of the educational cost for offering the program. With nonunionized apprenticeship programs, however, the postsecondary institutions have been invited to participate actively in the development of the curricula and in the securing of instructors for the programs." (state department commissioner of education)

Barrier 10--Unions want a scarcity of workers because that drives up both wages and benefits and that is far more important to them than any educational goals. (state department educator)

One respondent summed up the union position in the following quote: "I personally like the idea of cooperating with the schools; but as a union member/official, I'll do everything I can to make sure it doesn't happen." (state department official in right-to-work state)

"Some unions want to control the number of trainees entering the trade, thereby controlling the number of workers in the job market." (state department of education official)

Barrier 11--Some school administrators are concerned that organized labor groups will become special interest pressure groups. (researcher)

Barrier 12--Some preapprenticeship programs for high school students have purposely avoided linking with organized labor so as to avoid "turf" fights. (state department apprenticeship coordinator)

Barrier 13--Some prolabor leaders believe that vocational education has been taken over by procorporate educators and bureaucrats. (National Institute for Education staff member)

"What industry wants from vocational education is 'working stiffs' with job-specific skills . . . tailored to unique operations. Companies want hard working, loyal, and compliant employees; in other words, preferred are vocational education students who are trained not to question authority, not be 'taken in' by union organizers, to appreciate their jobs, and above all, not to make waves." (National Institute for Education staff member)

Barrier 14--Secondary and postsecondary schools have generally excluded organized labor from the program planning process. (union director of education)

Barrier 15--Nonunion administrators and instructors in vocational education have begun to assume that they are offering the full and complete training experience; some vocational educators believe that they should be able to confer journeyman status. (national labor union official)

D. PROBLEMS INVOLVING FINANCIAL MATTERS

Barrier 16--Limited financial resources prevent vocational educators from making more contacts with labor unions. (state department of education official)

Some school administrators are unwilling to provide staff time to work with organized labor and industry. (researcher)

Barrier 17--Limited financial resources prevent vocational education from providing more support for related instruction for apprentices. (three state department of education officials)

"Little progress in job training will be made under the Reagan administration, particularly in training dislocated workers. Obviously, a great deal more federal money must be appropriated--funds that provide a living subsidy in addition to tuition costs." (union director of education)

E. CONCERNS ABOUT TRAINEE PLACEMENT

Barrier 18--Organized labor is reluctant to assist cooperative education coordinators with the placement of students in suitable training stations. (state department of education consultant)

Barrier 19--The severe shortage of work in some trades precludes the placement of many apprentices. (state director of vocational education)

"Many apprenticeship training programs have become defunct because of the lack of jobs in the industries that would have to hire the new workers." (labor union official)

Barrier 20--Vocational education trains people in much vaster numbers than unions do, whether the industry needs them or not. (national labor union official)

F. CONCERNS ABOUT PROGRAM QUALITY

Barrier 21--Government procedures for accrediting and evaluating vocational training schools are less than adequate. (union director of education)

"Labor considers vocational education to be a preapprenticeship experience; vocational education considers it to be the full training experience by virtue of the fact that vocational education trains more people." (union official)

G. CONCERNS ABOUT RESEARCH

Barrier 22--Most current research into labor-education relationships seems to be designed for the researcher instead of the practitioner. (state department researcher)

The utility of such information in designing and delivering programs is questionable. Also, there is a dearth of research as regards vocational education and organized labor concerns. (educational researcher)

H. LACK OF CONCERN FOR TRAINING

Barrier 23--Traditionally, some unions have not tried to become directly involved in vocational education programs under the assumption that job training and preparation for work is the function of the school system. (union education director)

Some unions have also not been interested in helping to sponsor apprenticeship training programs. (union official)

The other side of the coin is represented by the many facilitators and case examples of close cooperation reported by some respondents. Most of the statements about the actions taken by educators, union leaders, and government officials have been paraphrased to represent the essence of the respondents' views. As in the case of the barriers, the specific statements have been clustered into related categories. The categories identified are as follows:

- A. Open communication and trust
- B. Representation on policy and advisory councils
- C. Sharing of instructional resources
- D. Availability of financial support
- E. Program flexibility and quality
- F. Provision of instruction about organized labor

A. OPEN COMMUNICATION AND TRUST

Facilitator 1--Continual and open communication exist between vocational education and other state agency personnel and organized labor leaders. This type of communication and mutual respect has made programs possible that otherwise might not have been obtainable. (state department of education planner)

Facilitator 2--The mutual trust, cooperation, and benefits that have been developed over the last 30 years between the United Association and Purdue University have made the program workable, rewarding for those involved, and a model for study. (professor of vocational education)

"A gradual building of trust has been grounded on high-quality performance and the honesty and integrity of vocational educators working with both labor and management officials."
(university research specialist)

B. REPRESENTATION ON POLICY AND ADVISORY COUNCILS

Facilitator 3--Organized labor is represented on the State Board for Vocational Education, the Governor's Job Training Council, and on many school advisory councils and committees. (state department of education planner)

Facilitator 4--The Bureau of Apprenticeship and Training provided technical assistance with registration, set up program planning meetings with the employers and unions, and promoted the apprenticeship concept within the schools. (school administrator)

Facilitator 5--The long-standing tradition of cooperation and mutual assistance between organized labor and vocational education in Wisconsin goes back at least as far as 1911 when the state Legislature decreed that vocational boards at the state and local levels include an equal number of union and management representatives. (state department of industry, labor and human relations administrator)

C. SHARING OF INSTRUCTIONAL RESOURCES

Facilitator 6--Provision of all related instruction for apprentices through the public school systems has strengthened linkages between vocational education and organized labor. (executive director of state apprenticeship and training advisory committee)

Facilitator 7--The ready availability of vocational classrooms, equipment, instructors, materials, and administrative support across the state has helped carry many apprenticeship and preapprenticeship courses through to completion. (state department of education official)

Facilitator 8--Community college boards of trustees have authorized the purchase of equipment, funds for retraining instructors, and the in-kind contributions of administrative staff time. (college dean)

Facilitator 9--The State Department of Vocational-Technical Education in Oklahoma realizes that by involving organized labor and its wealth of technical information in their vocational programs, they are able to infuse into their curriculum the latest technical processes currently being used in industry. (state department of education official)

D. AVAILABILITY OF FINANCIAL SUPPORT

Facilitator 10--The availability of state and federal funding has stimulated several community training projects and vocational education and organized labor cooperation. (state department of vocational education program planner)

Unions cannot afford training for the low number of apprentices they are now able to accept, which is causing them to look elsewhere for more economical training. "The vocational education system in Oklahoma is one place that is meeting their needs for related training." (state department of education official)

Facilitator 11--Because of Title III, JPTA funds would not be available for several months; the state department of vocational education provided emergency funds to implement a timely training program for union workers. (college dean)

E. PROGRAM FLEXIBILITY AND QUALITY

Facilitator 12--The adoption of the competency-based approach to apprenticeship training with its built-in flexibility and adaptability to meet the local requirements has served to strengthen the quality of many training programs. A shared commitment and trust on the part of business, labor, and vocational education helped overcome some initial hesitancy. (school administrator)

Facilitator 13--Unions were flexible with regard to the waiving of starting wage rates for student apprentices. This facilitated the placement of apprentices in union shops and, in turn, encouraged the apprenticeship concept. (college administrator)

Facilitator 14--The concern with competency (in competency-based apprenticeship programs) creates a common goal that pulls management, labor, educators, and equal employment opportunity officers together. (labor researcher)

Facilitator 15--Dual enrollment opportunities are provided; that is, the opportunity for apprentices to meet apprenticeship training requirements and also achieve credit toward an associate degree. (college dean)

Facilitator 16--Instructors who came from disadvantaged backgrounds were available to double as counselors for trainees inclined to abandon the program. (Job Corps administrator)

F. PROVISION OF INSTRUCTION ABOUT ORGANIZED LABOR

Facilitator 17--Efforts are made by many community colleges and universities to offer labor studies programs for union members. (state board of regents official)

At present, 7 state-assisted 2-year campuses in Ohio offer the associate of labor studies degree. The programs at these colleges were established in response to needs identified by organized labor groups. Each program has an appointed advisory council that provides for the continual involvement of representatives from these groups in planning, development, and evaluation activities. These labor studies programs are

generally considered to facilitate further cooperative efforts between educators and organized labor; that is, they serve as door openers when contacts between labor and vocational education groups may have been minimal. (state board of regents official)

Facilitator 18--Efforts are made by many community colleges and some secondary schools to provide instruction about the role of organized labor in our society. (union director of education)

CHAPTER VI

GUIDELINES FOR MORE EFFECTIVE LINKAGES BETWEEN VOCATIONAL EDUCATION AND ORGANIZED LABOR

The many responses received from organized labor, vocational education, and government officials were analyzed to determine what causes close and cooperative working relationships to exist in some states and communities, whereas almost bitter and antagonistic relationships exist in other states. It must be reported that the attitudes of all three categories of respondents varied widely within their own ranks. Although some governmental workers in the state bureaus of apprenticeship and training offices, for example, reported sincere efforts to promote cooperation among labor and education officials, the same workers in other states felt there was too much cooperation already and were more interested in preventing linkages.

Many of the practitioners, nevertheless, identified what they considered to be the critical elements behind the success of their programs. From the information gathered through reports, letters, and telephone calls, the following guidelines are offered to help vocational education, organized labor, and government officials at all levels improve vocational education programs for youth and adults by strengthening the relationships between organized labor and vocational education. As researchers who have been privileged to review confidential materials and to talk personally with many concerned persons, we feel these guidelines will enhance efforts to promote and maintain more effective collaborative efforts to the mutual benefit of all concerned.

- There is a need for more open and honest communication between leadership persons in both vocational education and organized labor. Good communication requires that each person in organized labor and vocational education sincerely seek to understand the other's views, roles, and responsibilities.
- There is a need to recognize the existence of several important and shared goals on the part of both vocational education and organized labor. Both groups are concerned with the preparation of youth and adults for productive and satisfying employment. That major goal, while not the only common one, should be reason enough to consider cooperation seriously.
- There should be an open recognition of the existence of some conflicting goals between public vocational education and organized labor. It should be acknowledged that although both parties may disagree on some issues, there is no reason to be disagreeable and, hence, dismiss all types of cooperation.
- There needs to be wider recognition by both vocational education and organized labor that much more can be accomplished by working together toward common goals than by working separately, or--even worse--by

working against one another. Limited resources, the need to pool the talent of both groups, and the mammoth training and retraining job that must be accomplished make closer cooperation an essential and sensible approach.

- There is a need for everyone concerned at all levels to take the initiative in establishing personal contacts and relationships with their counterparts in vocational education, organized labor, and government. There is clear evidence that where individuals have taken the initiative in sincere and appropriate ways, cooperation and mutual benefits have resulted. We must abolish the "let them take the first step" attitude.
- There is a need to avoid unjustified exaggeration and unfounded criticism of each other's efforts and points of view. Both organized labor and vocational education have made major contributions to our society and democratic way of life. These contributions should be acknowledged by each side and form a basis for constructive dialogue with each other.
- There is a need to share control through appropriate representation of organized labor and vocational education on state boards of education, advisory councils, and advisory committees. Both sides need to avoid the "unless we can control it we won't cooperate" syndrome. Each party can and should willingly contribute expertise and resources toward improvement and expansion of the programs needed.
- There is a need for more state, regional, and national conferences where vocational education, organized labor, and government officials can join together for constructive dialogue. One national conference a year, although helpful, is far from adequate for the type of information and ideas exchange needed.
- There is need for more federally supported research on the problem areas of common concern to both vocational education and organized labor. Many problems, such as credit for advanced placement, competency-testing, and matching training positions with job openings, could be addressed through joint research efforts.
- There is a need for both organized labor and vocational education to contribute more financial and other resources to the implementation of training programs for youth and adults. Strong leadership is required at the local, state, and national level to meet this critical need. All our youth and adults should be entitled to an appropriate opportunity to train or retrain for successful and satisfying employment. State and federal funds also have an obviously important role to play here as well.
- Educators at all levels need to be willing to recognize and to instruct their students about the important role that organized labor has played in our society. Appropriate units on the role of organized

labor in America need to be developed and widely disseminated to vocational educators. Staff development for their effective use should be offered.

- A major role of federal government, labor, and education leaders should be to promote cooperative and effective working relationships between vocational education and organized labor leaders. The attitudes and ideas espoused by these persons can be powerful motivators for encouraging collaborative and mutually beneficial relationships at the state and local levels.
- There needs to be a specialized national clearinghouse for the sharing of ideas, materials, and stories of successful vocational education and organized labor linkage programs. Without such a clearinghouse, which should include information about all types of apprenticeship programs, curriculum development efforts, instructor and administrator training programs, and so on, there will continue to be much duplication of effort and re-creation of the same "wheel" at a time when limited resources do not permit such a luxury.

Summary

The linkage descriptions provided within this report, the barriers and facilitators identified, and the guidelines for more effective linkages provide information that organized labor, vocational education, government, and other concerned leaders can use to further improve vocational education programs for our youth and adults. The authors hope constructive action will be initiated at all levels to help prepare America's work force more effectively for tomorrow's jobs.

APPENDICES

APPENDIX A: LETTER OF REQUEST



The Ohio State University



THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION

1960 Kenny Road
Columbus, Ohio 43210

Phone: 614-486-3655
Cable: CTVOCEDOSU/Columbus, Ohio

December 22, 1983

Dear :

The National Center has been asked by the U.S. Department of Education to conduct a "Feasibility Study to Improve Vocational Education Through Strengthened Linkages with Organized Labor." Attached is a project profile that outlines the purpose and objectives of the study.

Your assistance is requested to help us identify present linkage activities occurring between vocational education and organized labor groups in the United States. We are particularly interested in identifying innovative and exemplary practices, as well as any strengths and/or weaknesses (barriers) of existing relationships. We would appreciate any descriptive documents that are available related to linkage activities and programs.

Second, we would welcome your thoughts regarding what might be done to further develop or strengthen linkages between vocational education and organized labor (e.g., research needed, development work, information exchange, training activities, etc.).

Please send descriptive materials regarding linkage activities, suggestions for the strengthening of linkages, and/or the names and addresses of others who should be contacted. Should you have any questions about the study, feel free to contact me at 800-848-4815 or 614-486-3655. Any assistance you can provide will be greatly appreciated.

Sincerely,

Robert E. Norton
Project Director

REN/mas

Enclosure

cc: Dr. Robert E. Taylor

THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION

Feasibility Study to Improve
Vocational Education Through Strengthened
Linkages with Organized Labor

PROJECT PROFILE

THE NEED

Talented workers are critically needed to support economic growth in the United States and most foreign countries. The rapidly developing interdependencies among nations underscores the need to find ways to develop more effective cooperative linkages between vocational education and organized labor in the United States and throughout the world. A simultaneous need exists to minimize the problems and barriers that may erode the cooperation and exchange of research, development, and training results among nations. Innovative and alternative approaches needed to be identified and investigated.

THE PROJECT

The purpose of this feasibility study is to design a multi-year plan for improving vocational education through strengthened linkages with organized labor. A program of activities that includes information exchange, training, program development, and policy studies should contribute to the quality and adequacy of vocational education programs conducted in cooperation with organized labor throughout the world. Specific objectives of the study include:

- Identify present linkages between domestic vocational education and organized labor programs indicating relative strengths, deficiencies, and barriers of existing relationships.
- Identify present linkages between international vocational education and organized labor programs indicating strengths, deficiencies, and barriers of existing relationships in selected countries.
- Develop the parameters of a multi-year program that will contribute to the improvement of vocational education by strengthening linkages with organized labor.

Available information on present domestic linkages will be analyzed by the National Center to determine program strengths, barriers, innovations, and

exemplary practices. Under a subcontract with the Free Trade Union Institute, an arm of the AFL-CIO for international trade union research and development, information on present linkages between international vocational education and organized labor will also be analyzed. Further, the National Center and the Free Trade Union Institute will collaborate to produce a plan for a multi-year program of activities that would serve to improve vocational education nationally and internationally, by strengthening its linkages with organized labor.

RESULTING PUBLICATIONS/EXPECTED OUTCOMES

Three publications will result from this feasibility study. One report will examine the existing linkages between vocational education and organized labor in the United States, and a companion report will address the linkages existing between organized labor and vocational education internationally. The third report will consist of a multi-year program for improving vocational education nationally and internationally by strengthening its linkages with organized labor. The expected outcome is guidelines and recommendations for developing more effective cooperation linkages between vocational education and organized labor throughout the world.

AUDIENCE

The publications are intended for leaders in both vocational education and organized labor who can implement the types of linkage needed. They are also intended for local, state, and national policy makers who should support these efforts.

SPONSORSHIP

This activity is sponsored by the Office of Vocational and Adult Education, U.S. Department of Education. For more details on this project, contact Dr. Robert E. Norton, Project Director, at the National Center.

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FOR FURTHER INFORMATION, CONTACT
THE NATIONAL CENTER PROGRAM INFORMATION OFFICE
TEL: (614) 486-3855 OR (800) 848-4815
CABLE: CTVOCEDOBU/COLUMBUS, OHIO



THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
6100 KENNY ROAD - COLUMBUS, OHIO 43210

APPENDIX C: LIST OF RESPONSES BY CATEGORY, NAME, AND POSITION

The following is a list of the respondents who provided responses either by letter or by telephone to our request for information about current linkages between organized labor and vocational education in the United States. The respondents have been categorized by those representing (1) educational and vocational education, (2) organized labor, and (3) government agencies and professional associations. When known, the respondents' name, position, and agency are all provided. In the case of a few telephone contacts, the person's position was not obtained. This information is included to give the reader an idea of who provided the valuable input necessary for the development of this report.

RESPONDENTS REPRESENTING EDUCATION AND VOCATIONAL EDUCATION

Alabama	Robert E. Carter, Director, Division of Vocational Education Services
Arizona	Andrew P. Bernal, Director, Apprentice and Cooperative Education Programs, Rio Salado Community College Fred W. Gaudet, Jr., Associate Dean of Instruction, Maricopa Tech
California	Paul Bullock, Research Economist, University of California, Los Angeles Lisa Hartman Stie, Dissemination Specialist, Vocational and Occupational Information Center for Educators, State Community Colleges, State Department of Education
Colorado	Russell DeVriendt, Assistant Director, Planning and Human Resources, Community College Division, State Board for Community Colleges and Occupational Education Mary Ann Parthum, Director, Department of Adult, Vocational, and Practical Arts Education
Connecticut	John Arnet, Director of Academic Affairs, Board of Trustees for State Technical Colleges David N. Cooper, Associate Professor, Labor Education Center, The University of Connecticut

	Charles A. Salerno, Associate Consultant, Division of Vocational-Technical Schools, State Department of Education
District of Columbia	Phyllis Beckwith, Administrative Assistant, The Washington, D.C. School of Apprenticeship
	James Mahoney, Assistant Vice President for Federal Relations and Director of International Services, American Association of Community and Junior Colleges
	Floretta Dukes McKenzie, Superintendent of Schools, Chief State School Officer
	David White, The Washington, D.C. School of Apprenticeship
Florida	Fred Gainous, State Board of Community Colleges
	Harold H. Kastner, Jr., Interim Executive Director, State Board of Community Colleges, Department of Education
	Hollie Thomas, Professor, College of Education, Department of Educational Leadership, The Florida State University
Georgia	Loydia Webber, Cabinet Member, Atlanta Coalition for Women in Nontraditional Jobs Outreach Program
Hawaii	William A. Broadabent, Coordinator of Planning and Evaluation, University of Hawaii
	Leon Richards, Dean of Instruction, Kapiolani Community College
Idaho	Trudy Anderson, Assistant Administrator, Idaho State University, School of Vocational-Technical Education
	Gordon F. Jones, Manager, Trades Division and Division of Student Services, Idaho State Univer- sity School of Vocational-Technical Education
	Bernard L. Knapp, Coordinator, Adult Education, North Idaho College
Illinois	Dean Browning, Director, J.B. Johnson Career Development Center

	Ralph Cusick, Principal, Washburn Trade School
	Rupert Evans, Retired Dean, College of Education, University of Illinois
	Lonnie Hart, Manager for Special Programs, State Office of Education
	Chuck Mufich, Rockford Area Vocational Center
	Paul B. Musgrove, Executive Director, Tri-County Industry-Education-Labor Council (East Peoria)
	Joel Scheider, Stephenson Area Career Center
	Harry Tobin, Director of Industrial Education, Chicago Public Schools
	Phil Viso, Assistant Superintendent, State Department of Vocational and Career Education
	Jack Williams, Consultant for Special Programs, State Office of Education
Indiana	Max Eddy, Chairperson, Department of Industrial Technology, Purdue University
	Robert A. Scott, Director of Academic Affairs, State Commission for Higher Education
Iowa	David Billings, Director, School/Work Linkage Program, Des Moines Public Schools
	Lynn Feekin, Des Moines Area Community College
	Dick Gabriel, Supervisor of Career, Vocational, and Industrial Education, Des Moines Independent Community School District
Kansas	Barbara J. Schilling, Adult Education Supervisor, Kansas City Area Vocational Technical School
Kentucky	Ron W. Baugh, Director, Industrial Education Unit, State Department of Education
	Patrick R. Lake, Associate Director, Jefferson Community College
	John Lloyd, Vocational Education Department
	Wilburn Pratt, Assistant Superintendent, Vocational Education Department

	Charles T. Wethington, Jr., Chancellor, Community College System, University of Kentucky
Louisiana	W. J. Stafford, Jr., Assistant Superintendent for Vocational Education, State Department of Education
Maryland	Bert Cooperstein, Manager, Essex Community College Employee and Management Development Institute
	Herbert Fishpaw, Board Member, State Board of Education
	Angelo C. Gilli, Sr., Specialist, Personnel Development, State Department of Education
	Everett G. Miller, Sr., Director of Labor Studies, Dundalk Community College
	Lawrence A. Nespoli, Director of Instructional Programs, State Board for Community Colleges
	Joseph Testa, Associate Dean, Continuing Education and Community Services, Essex Community College
	Walter Varner, Apprenticeship-School Linkage Project
Massachusetts	David F. Cronin, Associate Commissioner, Commonwealth Department of Education
Michigan	Cathy Alessandro, Downriver Community Conference
	Lola Jackson, Chief of Finance, Data Management, and Special Programs, Vocational-Technical Education Service, Department of Education
	Shirley Putney, Downriver Community Conference
	W. Robert Schnieders, Director, Vocational Education, Downriver Area Vocational Consortium
Minnesota	Jim Brown, Instructor, University of Minnesota
	Paul M. Day, Chairperson, Minnesota Vocational Education Comprehensive Conference

	Joseph Graba, State Director, Board of Vocational-Technical Education
	Leon Linden, Director, St. Paul Technical Vocational Institute
	Harland Rowland, Director, Related Training Correspondence Program, 916 Vocational-Technical Institute
	Clifford H. Wiklund, Director, Vocational and Adult Education, Duluth Public Schools
Mississippi	James A. Reeves, Assistant State Director, Vocational-Technical Education, Department of Education
Missouri	Aphrodite Brough, Senior Associate, Academic Planning and Policy, Coordinating Board for Higher Education
	Gwendolyn W. Stephenson, Vice-Chancellor for Planning and Academic Affairs, St. Louis Community College
Montana	Gene R. Christiaansen, Assistant Superintendent, Department of Vocational Services, Office of Public Instruction
New Hampshire	Richard F. Monteith, Consultant, Exemplary Programs, State of New Hampshire Department of Education
New Jersey	James D. Lepanto, Dean of the Corporate College, Bergen Community College
New Mexico	Douglas L. Richardson, State Supervisor, Trade and Industrial Education, State Department of Education
New York	William Daggett, Director, Division of Occupa- tional Education Programs, State Education Department
	Richard E. Dwyer, Dean, Empire State College, State University of New York
	Carrie Getty, Liaison for Employers, the University of the State of New York

Lois S. Gray, Associate Dean, New York State School of Industrial and Labor Relations, Cornell University

Mike Halperin, Associate Superintendent, The High School of Fashion Industries

James A. Kadamus, Assistant Commissioner, Occupational and Continuing Education, State Education Department

Charles Stebbins, State Bureau of Trade, Technical and Health Occupations Education

Lee A. Traver, Chief, Bureau of Technology, Trade and Agriculture Programs, State Education Department

North Carolina

Leonard Goforth, Chief Consultant, State Department of Public Instruction

Phil Rollain, Consultant, State Department of Public Instruction

Robert W. Scott, President, State Board of Community Colleges

North Dakota

Charles Losh, State Supervisor, Trade, Technical and Health Education, State Board for Vocational Education

Oklahoma

Ivan J. Armstrong, State Supervisor, Trade and Industrial Education, State Department of Vocational and Technical Education

Ohio

Roy L. Butler, Senior Research Specialist, The National Center for Research in Vocational Education

Harry N. Drier, Associate Director, Development Division, The National Center for Research in Vocational Education

Walter Edling, Dean of Instruction, Lorraine County Community College

Edward L. Florak, Vice-President and Dean of Instruction, Jefferson Technical College

Barbara Kline, Director, The National Academy for Vocational Education, The National Center for Research in Vocational Education

Daniel LaVista, Dean of Instruction, Lakeland
Community College

Albert R. Neff, Administrator, Two-Year Campuses,
Work Force Policy and Development, State Board of
Regents

Mark Newton, Associate Director, Organizational
Development, The National Center for Research in
Vocational Education

Darrell L. Parks, Director, Vocational and Career
Education, State Department of Education

Charles Rinehart, Instructor, Columbus Technical
Institute

Lucille Campbell-Thrane, Associate Director,
Personnel Development and Field Services, The
National Center for Research in Vocational
Education

Catharine Warmbrod, Research Specialist, The
National Center for Research in Vocational
Education

Howard Washka, Assistant Dean of Instruction,
Lorraine County, Community College

Pennsylvania

James G. Hobbs, Education Administration
Associate, Division of Postsecondary Education
Services, State Department of Education

Marian Holmes, Director of Vocational Education,
Philadelphia School System

Samuel Kamplen, Philadelphia School System

John W. Struck, Executive Director, National
Association of State Directors of Vocational
Education

Rhode Island

Cynthia V. L. Ward, Administrative Assistant,
Community College of Rhode Island

South Carolina

G. William Dudley, Jr., Executive Director, State
Board for Technical and Comprehensive Education

E. Jimmy Smith, Industry/Education Liaison,
Office of Vocational Education, Department of
Education

Tennessee	Warner Dickerson, Assistant Commissioner, Vocational Education, Department of Education Ron Hosse, State Specialist, Trade and Industrial Education, State Department of Education Jerry D. Smothers, Supervisor of Vocational and Adult Education, Memphis City Schools
Texas	Robert W. Glover, Director, Center for the Study of Human Resources, The University of Texas at Austin Paul W. Lindsey, Associate Commissioner for Occupational Education and Technology, State Education Agency Clif Weaver, Associate Dean, Technical/Occupa- tional Programs, North Lake College
Utah	David R. Terry, Assistant Commissioner for Allied Health and Vocational Programs, State Board of Regents Kent L. Worthington, Assistant Superintendent, Vocational Education, State Office of Education
Virginia	Jeff Hockaday, Chancellor, Virginia Community College System
Washington	Raymond L. Harry, Vocational Education Program Director, Washington State Board for Community College Education Richard D. Spice, Program Supervisor, Trade and Industrial, Technical and Health Occupations Education Programs Development Section, Division of Vocational-Technical and Adult Education Services John N. Terrey, Executive Director, State Board for Community College Education
Wisconsin	Arnold H. Rothstast, Chief Supervisor of Voca- tional Education, State Board of Vocational, Technical and Adult Education Robert P. Sorensen, State Director, Board of Vocational, Technical and Adult Education

RESPONDENTS REPRESENTING ORGANIZED LABOR

Arkansas	Denise Williams, Project Director, State AFL-CIO
Connecticut	Lori McNulty, Deputy Director, State AFL-CIO
District of Columbia	Jim Auerbach, Assistant Director of Education, AFL/CIO
	Charles Crown, Machinists Union
	Kenneth Edwards, Skill and Improvement Department, International Brotherhood of Electrical Workers
	Roy O. Fuentes, Manager, Instruction and Professional Development, National Education Association
	Robert F. Harbrant, President, Foods and Allied Service Trades
	Terry Herndon, Executive Director, National Education Association
	Arthur F. Kane, Director of Education, International Brotherhood of Teamsters
	George A. Kanyok, Director, Office of Education, United Food and Commercial Workers
	Bill Lanxner, Director, National Speakers Bureau
	Nicholas R. Loope, Director of Research, United Brotherhood of Carpenters and Joiners of America
	Walter Lypka, Educational Director, Technical and Occupational Health Training, Graphic Communications International Union
	Floyd Miller, Assistant to the President for Research and Education, National Association of Letter Carriers
	Debra L. Ness, National Director, Lifelong Education and Development, Service Employees International Union
	Patrick J. O'Farrell, Executive Director, African-American Labor Center

	Joseph E. Reynolds, Education Department, Administrative Assistant, International Brotherhood of Teamsters
	Dorothy Shields, Director of the Department of Education, AFL-CIO
Illinois	G. J. Nixon, Jr., Director of Research, American Training Dispatchers Association
Indiana	Elmer Ransom, Chairperson, IUE Skilled Trades Council
Iowa	Mark L. Smith, Secretary-Treasurer, Iowa Federation of Labor
Maryland	Michelle Donlon, Administrative Assistant, The Brotherhood of Railway, Airline and Steamship Clerks, Freight Handlers, Express and Station Employees
	Herbert Fishpaw, President, Plumbers and Gasfitters Local 48, Baltimore
	R. I. Kilroy, International President, Brotherhood of Railway, Airline and Steamship Clerks, Freight Handlers, Express and Station Employees
Michigan	Roger Bobby, Assistant to the President, Brotherhood of Maintenance of Way Employees
	Charles Hafner, Skills Training Department, United Auto Workers
	Arthur Shy, Director of Education Programs, United Auto Workers
	Thomas L. Weekley, Coordinator, UAW Skilled Trades Department, United Auto Workers
Minnesota	Bernard Brammer, Vice-President, Minnesota AFL-CIO
	David Roe, President, Minnesota AFL-CIO
Missouri	Ron Overschmidt, President, Local 325, United Workers (Hazelwood)
Montana	James W. Murry, Executive Secretary, Montana AFL-CIO

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SELECTED RESOURCES

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